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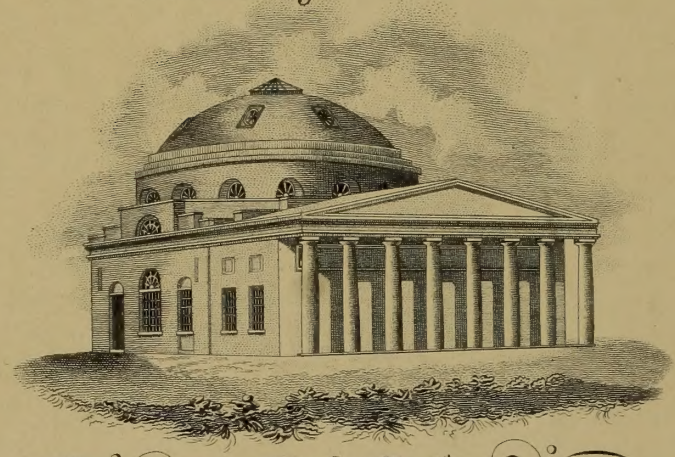

University of Maryland

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University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

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UNIVERSITY OF MARYLAND

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UNIVERSITY OF MARYLAND

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An

Inaugural Dissertation

on

Typhoid fever

Submitted to the

Examination

Of the Provost, Regents, and

Faculty of Physic

of the

University of Maryland

for

The degree of Doctor of Medecine

in the

Session of 1844/45

by

William D. Jamison

of

Baltimore

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18884

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To

E. Bartlett M.D

Professor of Theory and Practice

in the

University of Maryland

This Thesis

is respectfully inscribed

as a small tribute of respect

by the

Writer

A question of late has presented itself to my mind, On what branch, or what particular species of disease, shall I venture to take up, and submit to your consideration, feeling well impressed with a conviction of my inability to do any thing like justice to a theme, I long yearned after, nothing is left me, but to try one fraught equally with as much pleasure and interest, and perhaps nearer within the compass of my comprehension.

The subject therefore I have selected for the object of my remarks, is a disease perhaps, more generally diffused throughout the United States than any other not resembling the fever of the South, or the Intermittent of the malarious districts, which we know to be of the endemic type, but a disease "sui generis"

Aware of the bounds your clemency extends, due

allowance will be made for all erroneous or ill founded opinions I may have brought together in my attempt to treat of Typhoid fever.

I do not know any disease more difficult to speak of, and about which, so much has been written on, or one concerning which, there is such a diversity of opinions as that of Fevers

History

With regard the history of this disease, we have no very authentic accounts, neither of the period in which it first exhibited itself, or the manner of entrance, excepting traditionary accounts, which say, a disease similar to this "had afflicted Mankind from time immemorial" It having raged with great and almost unsubdued violence for centuries back, appears to be well established-

Cause

"The actual, producing, efficient cause of Typhoid fever as of most other diseases is entirely unknown to

-ous" although we say (perhaps hypothetically enough) the chief cause of its production is thought to arise from the air overcharged with human exhalation-

This disorder has often been considered as originating in jails, or in small and confined places, as in closed hatches of transport vessels- Magendie indeed has indisputably proved (as he thinks) that animal matter in a state of putrefaction, inhaled, or injected into the blood, will produce death, with what are called putrid symptoms- Granting such to be the case, such symptoms may or may not be associated with Typhoid fever- Again on the other hand we find this disease proceeds not from filth and dirt alone, as above represented, for by looking at the mode of living of the Russians, Greenlanders, and Esquimaux, who we know to be proverbial both for indolence, and the gout they display in eating the flesh scarce cold from the half killed dog, or drinking the oil from the whale, while in a true

: state of putrefaction, and yet to go further, we find them crowded together in holes underground their provisions occupying the same apartment, with all this, this class of persons does not suffer from Typhoid lesions -

We must therefore look to other causes for the production of this species of fever. what has been stated may prove to be the exciting cause, but I think the predisposing causes, are often the result of great mental depression, fatigue, privations, and cold, all have a long catalogue of ills attributed to them, which help indeed to propagate Typhoid fever. Upon viewing that excellent work of our Professor of Theory and Practice, he who has done so much, and laboured so assiduously for the advancement of Science, whose name is now enrolled, and become familiar with a class ever to be perpetuated, says, "mental anxiety and distress seem to predispose to a grave form of the disease".

The Irish writers have generally observed, that fathers of families, and others, whose character, and circumstances in life were such as to occasion great depression of spirits and apprehension for the future, were more subject to severe and dangerous attacks than those of a different temperament, and in different situations. Dr. Edward Percival remarks "that fevers which had been preceeded by great bodily fatigue, and mental anxiety were uniformly hazardous"

Mode of Invasion

To this disease belongs a peculiarity different from that of any other, its admission into our frame, is not ushered in and announced by a prostration of bodily vigor, by any symptom or set of symptoms indicative of its duration, or even of its ratio of fatality—

Our daily vocation is pursued, with its accustomed zeal, except perhaps with some slight rigor or headache not often in its early career do we find any irregularity of bowels, which is generally supposed to be the pre-

= cursor, or any deviation from a long routine of health - In many instances it is difficult for the patient to fix upon any particular day or time for his supposed indisposition, he observes a want of ability or inclination to pursue his customary labor, a feeling of inactivity seems to have gotten the better of him, he complains of drowsiness, similar to that he has often times experienced. "This obscure and indefinite condition of ill health may continue for more than a week occasionally for two or three weeks even, with but slight changes from day to day" Its premonitory signs are exceedingly insidious, although in some cases very clearly defined - We find few persons effected in precisely same manner, It varies according to habit, temperament, climate, and the numberless complications of local disease. This one will first patient complain of head disturbances, another abdominal lesions, and a third from affections of the chest. A great deal depends upon the state of

= their general health anterior to the developements of this disease -

Contagion.

Our next objet of enguiry is whether or not, it is capable of being communicated by contagion. Numerous and conflicting opinions are, and have been advanced in support of contaguinness. The host of names I might mention of men, who stand on the highest pinnacle of fame, speak indisputably of the fact that Typhoid is readily communicable during life, while again we look with equally as much pleasure on the other hand, cases, and proofs are made so palpable as "leaves not a loop whereon to hang a doubt" that the power of infection is, and does not exist.

I am aware of no way by which my aim can be attained, and set before you in stronger light than presenting a few cases, all within the limits of your recollection; and then in my own defence, give my views, humble as they may be to prove the fallacy of

=contagiousness- "It is undoubtedly a matter of great difficulty to prove whether the spread of an epidemic arises from one atmospheric cause, affec=-ting all simultaneously, or whether in a crowded com=-munity the poison is propagated from one individual to another" Repeated experiments, as you are aware, have been made on the living subject by inoculation, and the result has been, like disease has shewn itself.

Again, Clothes, It has been said have been taken from the body of a person labouring under Typhoid fever, and after the expiration of a few days, symptoms characteristic of this form have been made manifest.

In jails or crowded or ill-y ventilated places, where it is supposed this fever rages with more violence, there we can conceive, that, did any infectious dis=-ease germinate (owing to the confinement, accumu=-lation of offal, or mode of living) It could be con=-veyed to persons similarly situated.

Persons who have been incarcerated in Solitary

-cells, beyond the rage of any supposed epidemic, having no communication personally, by letter, or by clothing, with any one, except the persons belonging to the establishment; who were all free from disease of every kind, was attacked by a complaint, well known to be contagious, going to shew that the infectious matter can be conveyed through the air, and sometimes to a very considerable extent, as, during the volcanic eruption at Sumbawa, ashes were carried by the wind in such quantity to the Island of Sara, a distance of 300 miles, that the darkness during the day was more profound than ever had been witnessed in the most obscure night. If as we have seen, considerable substances, such as ashes, can be carried the distance spoken of, with how much greater facility, can aeriform bodies be distributed, and become more generally diffused or mingled during the process of respiration.

The cases enumerated above you must not think a fair criterion by any means, a body nearly exhausted,

whose recuperative powers are fast on the wane, whose spirits broken down by the "ills which flesh is heir to" are we know far more susceptible to disease of all kinds, and therefore when within the influence of one much more mild, in all probability its non-contagiousness would be exhibited as distinctly as the most pestilential.

Although this is a doctrine peculiar to itself (you may say) and require facts more closely interwoven to support so tottering an assumption, I will endeavour to shew that persons in the full enjoyment of health, although similarly situated, escape with like impunity. We see every day, nurses whose duty it is, to be in the same apartment, and surrounding the bed of the sick, administering to him, breathing the same charged atmosphere, and yet from viewing the statistics, the majority of those who die, I believe were predisposed to some grave affection.

Let us look to the case of a healthy person

- who perhaps is lending his aid, and constantly at the bed side of a dear brother, subject to all exhal-
-ations, dressing and undressing, and in fact leaving nothing undone, which, save the disease at all contagious, similar indeed would be his fate.

The cases which are weekly brought to our Infirmary, and after a thorough and impartial exam-
-ination, are pronounced to be true and well marked cases of Typhoid fever" - a change is brought about in their system by proper medicinal means, preparat-
-ory to the treatment of such fevers, any amelior-
-ation or departure from health, is steadily and anxiously watched, not by the attendant Physician alone, but by a host of followers, all anxious and eager by their close attention and minute examin-
-ation to qualify themselves for the arduous tasks they have undertaken, examining all physical signs - propounding questions, hoping by their response, to catch some new idea, wherein to build

- their hope upon - and yet with all these cases so infallably stamped - surrounded by persons, all of whom are there resting, and looking forward to the morrow with bright anticipations for a hasty restitution to health - we find no propagation of this disease -

Duration

The period or the length of time occupied by the disease now claims our attention -

The average duration was by some formerly thought to occupy about twenty days, while Chomel divides the time requisite for the full developement of the disease into three periods each of which comprises a week, and are known as septenary periods, and remarks that the majority of cases tended to amelioration from the 17th to 20th day - St. Louis considers the duration to be about 25 days, but perhaps owing to the great frequency of abdominal complications, it may have proved some hindrance to an earlier state of convalescence

- So common is it for this complaint to run its course in a definite time, that the familiar appelation of the one and twenty day fever has been given to it.

The period of recovery must necessarily depend upon the severity of the attack, the general state of his health anterior to his present disease, and no little upon the climate, whether it be that of the arid heat of the Torrids, or the tempestuous and chilly blast of the Frigid zone.

It is I believe a prevailing opinion, that this disease like the exanthemata, give to the patient a hope of its non-occurrence. From that excellent Monograph of the late Professor Smith on Typhus, he says "I have never known, nor heard of its occurrence in the same person" - This conclusion is formed after a close observation of twenty five years, and carries with it great weight, from the knowledge we have of the soundness of his judgement, and the great success that attended his practice -

Symptoms.

The precursory symptoms are languor, lassitude, and prostration of strength, a feeling of mal-aise, without decided pain, sense of chilliness or coldness along the spine amounting to shivering or rigors, a sense of weight or confusion of the head, indifference to pleasure or business, disturbed or unrefreshing sleep, frightful dreams, nausea, tongue coated, red, dry and shrunken, tongue sticks to roof of mouth, mouth more red than in any other fever, sordes on teeth, corner of mouth & lips, specks in inner surface of mucous membrane of the mouth, Cracking of the angle at the mouth and surface of tongue, these taken in consideration, with the general condition of patient, import a very dangerous situation. dry. brown or black tongue is often present, dry state of tongue from the commencement of the attack is supposed to be a bad prognosis, Beefsteak tongue is sufficient to awaken the utmost alarm in Physician for recovery of patient - Tongue is thought to hold no

- specific relation to condition of the mucous membrane of stomach, loss of appetite, dizziness brought on by being placed in a sitting from a recumbent posture -

There is another sign very common in fevers of this type that is, the appearance of purplish spots in the skin, technically known as petechiæ - Petechiæ may appear very early, but are generally observed about the middle stage - great thirst is a usual attendant, which is made manifest by patient masking frequent demands for cold, sometimes for warm drinks - You will generally find Meteorism or swelling of the intestines in the right side, which is ascertained by pressure. Epistaxis is an important circumstance, and its frequent occurrence is peculiar to this affection - Tinnitus - aureum or buzzing in ears is observed in a large majority of cases, and associated sometimes with deafness. Cough though a general attendant does not require immediate attention, slight palliatives do well, Sometimes complicated with acute Bronchitis, terminates frequently in Pneumonia.

= developement of tubercles in many parts of lungs at once
blood expectorated, respiration almost always increased,
somewhat interrupted, when so generally found to ter-
=minate fatally. Alæ nasi act freely, upper lip contr=
=acted, slipping down to fort of bed is a sure indication
of great debility, many patients refusing to be made more
comfortable, fearing the shock occasioned by moving -

Distention of bladder, all control over bladder is lost,
and for the greater comfort of patient urine should be drawn
off with a catheter - Vomiting a very unfavourable
symptom, Tuberculous meningitis. dysphagia. Ulceration
of Intestines, the ratio in which this symptom is said
to shew itself, is about one in six, no particular day
is fixed for its appearance, although very serious symp-
=toms announce its presentation, as a sharp rending
pain, experienced suddenly in the abdomen, soon followed
by a loss of expression in the features - nausea, usually
accompanied by chills, and all the most characteristic
symptoms of an intense acute peritonitis - We may judge

= with some accuracy of its event by an increased number of dejections, the certainty of its appearance is rendered more apparent by pressure, which causes pain to extend nearly over whole surface of body. pain in right illiac region, gurgling sound when pressure is made upon the lower part of the belly. effusion of sero-purulent fluid, patient can hardly bear weight of bed clothes. Diarhea is one of the most common symptoms, is supposed to shew itself in early stage of disease, the faeces generally are very thin, having a brownish tint resembling that of coffee grounds, the danger in this disease is thought not to be in proportion to the amount of diarheal discharges, but I think the weakness and great debility brought on by an increase of evacuations, must certainly tend to retard his recovery, if not hasten his dissolution. Contraction of intestines is looked upon as an ominous sign. Pulse very variable, if too frequent, & does not diminish, it is an unfavourable sign, if pulse is frequent when patient stands, and not when he lays down, this is regarded as a favourable sign. Cold extremities are present,

= whether dying or convalescing. Somnolency presents itself in its various stages, very nearly in all cases, when in this condition patient manifests no disposition to converse, difficult to rouse, and when questioned gives evidence of displeasure by some distortion of countenance, shewing a total disregard for all around, refusing even to look upon any member of family. Sub. subtus - tendinem. hic = = ough, grinding of teeth, deafness, sometimes strabismus these are symptoms of last stages, intolerance to light, exquis = = ite sensibility in lower extremities, œdema during convа = = lesence, desquamation of cuticle, enlargement of spleen, change of colour with some induration, are seen after death, sibillous or mucous râle, may be heard in nearly every case.

Treatment

Tis to be regretted that medecines however judici = = ously administered, have in no instance the power to cut short this form of fever, a certain period is marked out for its duration, and to that end will

= it run, The mode of treatment, is as different, as it is uncertain, some using depletory measures in every case, while others lock up the vital fluid, and perhaps give stimulants &c. However pursue what course we will, pursue the direct opposite treatment in every alter= =nate case, and the chances of recovery are very much ag= =ainst the patient. So, very often, the less we do, the greater is the probability of his recovery.

Treatment of first stage, Obtain a free evacuation, if state of bowels, do not contra-indicate it, a single day is of great importance in regard the propriety of administering cathartics. Venesection is thought to be admissable by some, but that condition which would demand the lancet, is sec= =ondary to the amount of muscular strength kept up or retained by non-depletion - If patient is seen on the very first or second day of his attack, the loss of blood to the amount of from ℥ij à ℥vj ℈ might be followed with benefit.

Empty Stomach with Tart antimony or Ipecac, after obtaining an emesis, it is proper to give very mild solution of Tart Antimony

=just in nauseating doses, when we will have arrived at second stage. which is begining of second week. we are to make use of no active medicaments. It is in this middle stage, where constantly local symptoms present them=selves, if patient complains of thirst, let him have ice or cold water slightly acidulated. at this period, patients have to Dr. Roby the odour closely similar to a sour Irish baby, ablutions are very grateful and should be done with sponge dipped in vinegar and water, during diarrhea give lime water mixture with any preperation of opium should he not tolerate this, give an enema composed of starch and opium, Astringents are thought not to be advisable, If dysenia be present, use catheter two or three times daily or as often as occasion may demand.

Sometimes delerium is present to an alarming extent, & should be treated by the application of pounded ice in a bladder to the head, with head shorn of its hair, and the application of a small blister to back of neck, although blis=ters are not advised except to answer this end,

Pneumonia will be found complicated with this disease,

= generally known by the rusty col.d sputa.

Local abstraction of blood, as the application of cupd, or leeches to surface of chest is preferable to general depletion giving also Calomel say grs iij or combined with Chalk & opium. Be particularly careful to avoid exhausting pa= =tient by drastic Cathartics. Symptoms of Arachnitis will shew themselves, which will be treated by leeching & cupping, cold applications, internal administration of alteratives as Jamis Powder, making use of revulsives over surface of body

Patient is annoyed by a short dry cough, resem= =bling Bronchitis, for the removal of which, venesection early in stage and use of Ipecac or Tart Antimony —

Phlebitis makes its appearance during convalescence, commencing in intense pain in calf of leg, Saphena vein presents a red streak & feels like a hard knotted cord, Treatment. apply leeches to limb freely, then foment limb constantly, small portions of Lucp Morphia given to allay pain and also in conjunction with Protochlor Hyd to produce slight turgidity of gums. External applications of Iodine

An Inaugural Dissertation
on
Carcinoma or Cancer
Submitted to the examination of
the Provost Regents and
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Evan W. Warfield
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To Nathan R. Smith M.D. Professor of Surgery in the University of Maryland and Surgeon to the Baltimore Infirmary, this dissertation is most respectfully dedicated by the Author.

Cancer is a disease with respect to the nature and cure of which, the enlightened and Experienced practitioners of all ages, have confessed their extreme ignorance, whilst bold and ignorant Empirics have at various periods, confidently avowed the efficacy of their respective Specifics, in all the stages and forms of that terrible malady; and unfortunately, despair of receiving aid from regular practitioners, continues to drive the persons who are afflicted with that affection into the hand of unprincipled pretenders.

If we may credit the accounts published by various authors, it appears that there is scarcely any part of the body which is wholly Exempt from the attacks of the cancerous affection; but it has been ascertained by reiterated observation, that glandular parts are much

more liable to this disease than any others.
The parts most subject to this disease are, the breasts of women, the womb, tongue, mouth, lips, nose, face, skin, testes, penis, prostrate gland, stomach, liver &c. No part of the body is more subject to cancer than the breasts of women, the small glands of which are so liable to obstruction.
It may occur at any period of life, but it seldom appears till about the time at which the menses usually disappear. Tumours arising in the breast previous to this period, have been considered by some authors as being only of a scrofulous nature, and it is probably owing to this circumstance that several cures have been made on tumours of the breast by mercurial friction, and other remedies.
This destructive disease excites the contiguous parts, whatever their nature may be, to the same diseased action. The skin, the cellular substance of muscles,

and the periosteum of bones all become affected, if they are in the vicinity of cancer. This very striking circumstance in the history of carcinoma, distinguishes it from most other diseases.

Cancers are generally divided by authors into occult and open, of which varieties we shall speak more fully hereafter.

General History.

In its early stage cancer has the appearance of a small hard tumour, for the most part round, sometimes irregular, and has been compared, both from its size and figure to a hazelnut. Its increase is usually slow, unless Exposed to irritation; "When slow," says Mr. Abernethy, "it is in general unremitting, at least I am inclined to think the disease though it may be checked, cannot be made to recede, by that medical treatment which lessens the bulk of other sarcomatous tumours." The same gentleman adds, "I state this opinion however

with some hesitation, for I have been informed by surgeons, that diseases, the event of which proved them to be carcinomatous, have suffered a considerable reduction in size, by" a peculiar local treatment. "This circumstance", he further adds, "affords, in my opinion, another criterion by which it," that is cancer, "may in general be distinguished."
As the cancerous tumour enlarges, it generally, though not constantly, becomes unequal upon its surface, so that this inequality has been considered as characteristic of this disease, and it is a circumstance which deserves much attention.
A lancinating pain in the part, frequently accompanies its growth; but in some cases this pain is wanting. It attends also on other tumours, the structure of which are unlike carcinoma; this pain cannot therefore be considered as an infallible criterion of the nature of a tumour. This pain when present

is of a peculiar kind; it consists either of sharp lancinating throbs, of deep shootings, or, in absence of these, of a constant gnawing, or sense of burning heat diffused over it; or of a prickling like the thrust of needles. At first it prevails chiefly on the changes of weather, but, in process of time, it becomes almost constant, independently of any external cause, and it then spread round the seat of the disease. As the disease increases it acquires an additional incompressible hardness, and protuberance in the middle, while the surrounding subcutaneous vessels assume a varicose state, or feel thick and knotty.

The diseased skin covering a carcinomatous tumour sometimes ulcerates, before the tumour has attained any great magnitude; the skin begins gradually to change colour, it becomes first red, then purple, or lead coloured,

and so the shade advances, being mottled as it were, with varicose livid veins, until it ends in black; but before this last colour appears, the integuments generally give way, and the contents of the tumor fall out; particularly when cells, (filled with pulpy matter, of different degrees of consistency, and of various colours) within the tumour are by this meane laid open; from the sides of which an excoriating ichor copiously distils. On the bursting of the integuments, the disorder becomes what is called an open or ulcerated cancer, and presents a new series of phenomena.

Open, or Ulcerated.

The following definition is given by Mr. Pearson, who says, "A cancerous ulcer is attended with a constant sense of ardent pain; it is irregular in its figure, and commonly presents an unequal

surface; it discharges a sordid, sanious and foetid matter; the edges of the sore are thick, indurated, and often exquisitely painful; they are sometimes inverted, at other times retorted, and often exhibit a serrated appearance. The ulcer, in its progress, is frequently attended with haemorrages, in consequence of the erosion of blood vessels."

From the body of the sore, or its edge, a kind of spungy sprouting flesh, or growth, takes place, which soon assumes symptoms of gangrene or decay, and falls off, while the same appearance is successively renewed.

The progress of the disease is various; in some cases it advances rapidly, and there prevails, along with it, considerable inflamation; but more frequently it advances gradually, by an almost imperceptible corrosion of the adjacent parts. The direction of this corrosion is generally

in the course of the lymphatics, and the glands in the vicinity of the diseased parts successively assume the diseased action.

During the use of remedies, the thin ichor often assumes the appearance of pus, at least of a white sordes resembling pus, which adheres closely to different parts of the surface of the sore, this change however divests it of no portion of its acrimony, nor imparts to it any of the properties of real pus. In the progress of the ulceration, the sore acquires a peculiar, and intolerable stench whereby it may be readily distinguished, by practitioners conversant with the disease. It is more offensive than the odour, from any other species of ulcer; and is equally loathsome to the patient, and to the by-standers. This foetor is increased by the use of greasy applications.

When the diseased actions have, as it were, exhausted themselves by their vehemence, an attempt at reparation appears to take place, similar to that which occurs in healthy parts. New flesh is formed, constituting a fungus of peculiar hardness, as it partakes of the diseased actions by which it was produced. This fungus occasionally even cicatrizes. But though the violence of the disorder is thus mitigated, though it may be for some time indolent and stationary, it is never spontaneously cured, nor does the part ever become healthy.

In general, however, the disease continues to extend and the glands at a considerable distance from the original tumour become affected. The progress of carcinoma in an absorbent gland is the same as that which has been already described. The disease is

communicated from one gland to another; occasionally a gland or two become diseased out of the ordinary route of the absorbed fluid. In the advanced stage of the disease a number of small tumours, of a structure similar to that which has been noticed to exist in the incipient state of cancer, are formed at a distance from the chief tumour, so as to form a circle round it.

As the loss of substance proceeds, the functions of the body become disturbed, the appetite fails, and the strength gradually decreases. Hectic fever is formed, with strong evening exacerbations, but before it can prove fatal, the patient is generally cut off by haemorrhage, the corrosion of the larger blood-vessels being one distinguishing characteristic of the kind of cancer; or by a fit of convulsion, and thus a miserable and painful existence is terminated.

Such is the general appearance of this disease, one of the most painful and loathsome that can attack the human system. The patients existence is often protracted under the most excruciating torture, until the body has fallen into a state of extreme emaciation, receiving little alleviation from any treatment hitherto adopted,

Although we are fully warranted, by the testimony of the most respectable writers on this subject, in considering the above as the usual phenomena presented by this disease, it must be admitted that there are frequent variations in particular cases, and these variations are the sources of much perplexity to practitioners, when called on to decide as to the nature of tumours and ulcers.

There is another circumstance in the history of cancer which deserves attention and inves-

-tigation; that is, whether a disease not originally cancerous can become so, in its progress? We can only form our opinions on this subject from analogy and observation. Analogy leads us to believe, that such an alteration in the diseased actions may readily take place. Venereal buboes often change their nature, after the administration of mercury, and become troublesome sores, to which that medicine is rather detrimental than beneficial. Injuries induce inflammation and enlargement of parts, which afterwards degenerate into scrofulous diseases.

"But though analogy seems so strongly to favour the opinion, I cannot" says Mr. Abernethy, "take upon myself to say, that my observations have confirmed it. When tumours have been removed, the history of which corresponded to that of cancer a cancerous structure was observed in them;

and, on the contrary, in diseases of an apparently different nature, a different organization has been found. I once, indeed, assisted at an operation where the tumour was of that kind which I have denominated pancreatic; and I heard afterwards, that the patient died in the country of a disease which was reputed cancerous."

"When a hard tumour, which has existed a long time in a gland, without either diminishing or increasing, and without giving any pain, begins at length to grow uneasy, to extend gradually in its dimensions, and to be affected with occasional pungent and lancinating pains, there is reason to suspect, that it is taking on the cancerous action; this is not, however, invariably the case; since many instances have occured, where the tumour has fallen into a state

of inflamation, and even been attended with that peculiar kind of pain which most of all is to be suspected, and yet the disease has not proved to be of that fatal nature, but the patient has received a certain, though tedious cure. These instances, when they do occur, are eagerly laid hold of by quacks, and the venders of nostrums; and are advertised as instances of the efficacy of their plans, which unwary persons, really affected with cancer, are sometimes drawn in to make trial of, at the expence, perhaps, of the only resource which remains for their security. This disease, as before observed, does not put on the same appearance in every instance, but, in common with some other local affections, is so far influenced by the peculiarity of structure, of the part affected, as to exhibit very different appearances.

These, indeed, have borne so little resemblance in some cases, as to have tempted authors to deny that the general term cancer could be strictly applied to them. Mr. Adams thinks the cancer of the uterus, at least, a very fair exception; and not only that of the rectum, but every carcinomatous affection which begins on the skin, or parts superficially situated, seems clearly distinct from the same diseases in the breasts or other secreting glands. The incipient state of cancer has been distinguished by the term of scirrhus by authors. The scirrhus state of a gland is that in which the tumour gives no uneasiness, and in which the skin does not lose its natural colour. Every indurated and insensible tumour in a gland is, therefore, strictly speaking a scirrhus: the term, however is never applied to such affections, unless they threaten to terminate in cancer.

Anatomical Structure.

It is difficult to convey correct ideas of the structure of carcinoma by words, or even by drawings. In the generality of instances the diseased part is peculiarly hard. and there are intermixed with it firm whitish bands, There is indeed no other striking circumstance, which can be mentioned as constantly claiming attention, except perhaps the smooth and solid appearance which has been said to resemble that of a raw Irish potatoe when cut. These firm whitish bands sometimes extend in all direc-tions from the middle towards the circumfer-ence of a carcinomatous tumour, having little intervening matter. Sometimes they intersect it irregularly; having interposed between them a firm brownish substance, which may be scraped out with the finger. Sometimes they form cells, containing a pulpy matter of various

colours and consistency; and sometimes these bands assume an arborescent arrangement, ramifying through the diseased substance.

Firm white bands, like thickened and compact cellular substance, are seen as the disease advances, to extend themselves from the original tumour amidst the fat in which it is occasionally imbedded, intercepting portions of fat in the irregular areolae which they form.

This circumstance deserves consideration on account of its practical application; for if after removing a carcinomatous tumour, the surgeon attends to the part which has been taken away, he will see if any of these bands have been cut through, and consequently, whether some of this diseased substance, which ought to have been removed, has not been left.

This circumstance can only be observed by examining the part which has been removed.

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This circumstance can only be observed by examining the part which has been removed.

These are the chief circumstances, which characterize cancer, and distinguish it from other diseases. The account of them is brief, because it was designed merely to point out its distinguishing characters.

Causes.

The want of familiar acquaintance with the diagnostic signs of cancer, has been a most fertile source of error and deception; and, "while we remain unfurnished with authentic standards," or established data, by which all observations may be examined, it ought not to excite surprise, if the same name be applied to two complaints, the histories of which are different from each other, or, if opposite modes of treatment be directed for diseases of the same nature.

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After all that has been written, and said on this subject, it must be admitted however,

that we are still in the dark concerning the cause of scirrhus and cancer, or the nature of that peculiarity of constitution in different persons, which predisposes them to this malignant derangement of animal structure.
We do not even know what changes constitute the cancerous state of an organ; and it is yet debated in the medical world whether the disease be local or general.
Cancer occurs most commonly in elderly persons, but no age is exempt from it.

Predisposing causes.

The period of life at which it most commonly occurs, and the circumstances of its progress, seem to indicate that the causes, whatever they are, must be of a sedative or debilitating nature, and that they are such as are capable of giving rise to, and actually do give rise to a general cachectic state.

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Cancer occurs most commonly in elderly persons, but no age is exempt from it.

Predisposing causes

The period of life at which it most commonly occurs, and the circumstances of its progress, seem to indicate that the causes whatever they are, must be of a relative or debilitating nature, and that they are such as are capable of giving rise to, and actually do give rise to general cachectic state.

It is this state, perhaps, on which the obstinacy of the disease depends; and its appearance in the form of cancer is particularly favoured by the minuteness and peculiarity of glandular organization, whose circulation, at all times depends much on the irritability of its own vessels. Any diminution of the general tone of the animal fibre, must, on that account, display itself by a stronger tendency to obstruction in such parts.

As cancers occur much more frequently now, than in former times, we must admit the existence of causes, which, cannot be otherwise than general in their nature, as external circumstances or accidents, must have been about the same formerly as at present. We must therefore look for these causes in the body itself. Perhaps some light might be thrown on the subject by comparing the modes of

life in former times, with those which are adopted at the present period. The differences are chiefly referable to the two following general heads: Increase of Luxury in the higher ranks of society; and the immoderate use of Spirits, and other articles producing indirect debility, joined to the want of a due quantity of nourishment, in proportion to the labour undergone, in the lower orders of society.

Some difficulty may perhaps, attend the precise application of these general causes, to any particular modifications of disease; but still the circumstances seem probable, and the more the subject is studied, the greater influence will the causes seem to possess, in accounting for this and many other forms of diseases now so prevalent.

The exciting or occasional causes may be referred, either to: Accidental impressions producing injury

of the part. Changes altering the course of the regular circulation, and determining to the seat of of the disease. Or, to both these causes combined. Of the former are all External accidents, as blows, contusions, preceding inflamations, &c. Even the practice of wearing stays, in the manner commonly practised by females, must greatly expose to obstructions by resisting the passage of the fluids through the minute vessels. Of the others are all suppressed discharges, affections of the mind, &c.

Those women who are attacked with this disease in early life, we find, for the most part, irregular; hence we may with propriety consider the cessation of the regular Menstrual discharge, as a cause of cancer in the females of advanced life; as well as the suppression of hemorrhoids in the mail, when long accustomed to them. Indeed, out of twenty women affected with

cancer, fifteen of them will be at this critical age. The pressure of grief long continued, by producing a powerfully sedative effect, has been said by many to have caused this disorder. So sudden and violent emotions have been also sometimes suspected of producing the same effect.

Cure.

It cannot be doubted that numerous cases on record, denominated cancer, and perhaps all those in which, cures of this disease are said to have been performed, without destroying or removing the part affected, were complaints of a very different nature. Many hard tumours of the breast, especially those of a scrofulous kind, and such as appear after child bearing, have been mistaken for cancers, but they may generally be dispersed by the early and repeated application of leeches, bathing with camphorated

spirits, soap liniments, hemlock poultices, turpentine lotions, or gentle friction with mercurial ointment. It has been justly observed by Mr. Home, that the success met with in some of these cases, is often productive of material mischief, by inducing practitioners to be too sanguine, and to go on with the use of the same means in other cases, encouraged by this former success, till the disease has arrived at the state of a true cancer, and has advanced beyond that stage in which it might have been thoroughly removed by an operation. It is of great importance, on the one hand, not to alarm our patients prematurely, by giving a hasty and unfavourable opinion; but on the other hand, practitioners would do well to weigh all the circumstances which may enable them to decide on the nature of such tumours, and if they are confident of their

being carcinomatous, to lose no time in advising the only step which can be taken for the security of the unfortunate sufferers.

The chief difficulty on this subject, is to discriminate between scrofulous indurations, and scirrhus tumours; and it is a point of great importance to be correctly settled, as on this depends the comfort and safety of patients. If a cancerous affection is decided by the Surgeon to be a scrofulous tumour, the patient may indulge a fatal and delusive hope of perfect safety until the disease has made so great progress, as to be without the reach of surgery. If on the other hand a scrofulous tumour is judged to be cancerous, the patient is unnecessarily subjected to a formidable operation, and according to the opinions of some respectable pathologists, rendered particularly liable to phthisis pulmonalis.

To discriminate between these two affections is sometimes very difficult, "so much," says Mr. Home, "does the same disease differ in its appearances, in different patients, from the endless peculiarities of their constitutions, by which every part of their body must be more or less influenced, that it is not possible in practice to distinguish, in all cases, between Carcinomatous and Scrofulous tumours, after they have advanced to a certain size; and I am ready to confess that, in many instances, I have mistaken the one for the other and have removed, by operation, tumours which at the time had the appearance of being cancerous, and upon examination, after their removal, found them of a scrofulous nature. On the other hand, I have neglected to remove tumours, from the circumstances making it probable that they Scrofulous; which afterwards became cancerous,

and destroyed the patient?" In all such doubtful cases, it is the safest rule to advise the removal of the tumour, if it be situated fairly, for the operation; as it is a much less serious inconvenience to lose a scrofulous gland, than to retain a cancerous tumour, which probably might cost the patient his life.

Palliative Treatment.

As the disease, when arrived at the open, or ulcerous state, cannot be successively combated through the medium of the constitution, and as none of the remedies proposed have, on trial been found to merit our confidence, it would be a waste of time even to enumerate them; we shall, therefore, briefly mention those remedies from which we may hope to procure for the patient some temporary advantages.

The Topical Applications to an open cancer, which have been found most useful to alleviate pain,

cleanse the sore, or to correct the fœtid smell arising from it, are: Fresh bruised hemlock leaves. Scraped young carrots. The fermented poultice. Finely levigated chalk. Powdered charcoal. Carbonic acid gas. A watery solution of opium. Liquid Tar, or tar water.
The internal remedies which have been most beneficial are:. Very small and long continued doses of arsenic. Liberal doses of cicuta. Free use of opium. Aconitum. Hyosciamus. Belladona. Solanum. Nitrial flowers. Corrosive Sublimate. Nux vomica, &c. The chief object the surgeon has in administering these remedies. is the alleviation of pain. It is to this property alone, in different narcotic vegetables, that many authors attribute their supposed virtue in cancerous affections. Pain not only abstractly, but relatively, impairs the body. Its stimulus is not merely attended with direct morbid

consequences, but tends also indirectly to the patients injury, by destroying the appetite, and producing the most afflicting state of mental dejection.

The remedies capable of alleviating the violence of pain, are both general and local. Of the former kind, not only opium, but most of the inferior narcotics, have been administered with considerable temporary benefit.

It is generally expedient, indeed, to carry the use of these remedies as far as the immediate safety of the patient will admit; not forgetting, that in the alleviation of pain is, perhaps, involved the prolongation of life; for debility, the gradual increase of which marks the progress of cancer to its fatal termination, is greatly increased by long continued and violent pain.

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Extirpation.

But neither the external nor internal remedies, however apparently useful for a time, can be depended on, for the cure of a genuine confirmed cancer.

Scirrhous tumours and cancerous excrescences may be removed from almost all the external parts of the body, but no surgeon perhaps could now be found to undertake the excision of any internal organ; for example the uterus.

The circumstances which indicate the propriety of an operation are these:-

When a cancer is so situated as not to expose any large blood-vessels or nerves to be cut in the operation. When the whole of the morbid parts can certainly be removed. When the disease has been excited into action by external accidental causes. When the patient is other-

-wise healthy. and. When the Cancer has not shewn evident symptoms of considerable Malignancy during its progress, and does not seem to have involved the adjacent glands, or absorbent vessels. The two first of these requisites are not to be dispensed with; for, unless we can dissect out all the morbid parts, without incurring the danger of dividing important nerves; or arteries which could not be controuled by ligatures, the operation must never be attempted.

The general rules for the performance of the operation are:-

To make the external wound nearly in the direction of the subjacent muscular fibres, and to make it large enough for the removal of all the morbid parts. To save, if possible, as much sound skin as will neatly cover the surface of the wound

To secure, by ligature, every bleeding vessel, which might hazard a subsequent haemorhage.
To retain the lips of the wound in close contact, without interposing any dressing or extreneous substance between them.
To preserve the parts in an easy and steady position for some days, before they are looked at or opened. To use no other than mild and cooling applications during the cure.
When I to conclude this dissertation without expressing my thanks to the professors who fill their respective chairs, with so much honour to themselves and advantage to their pupils, I should consider myself guilty of ingratitude.
In taking leave of my medical teachers in the college, I beg leave to assure them of my high respect for their talents and enterprize, and of my ardent wishes that this school may

soon attain the rank to which the merits
of its professors and the liberal principles
on which it is established entitle it.

how attain the rank to which his merits
of his progress and the liberal principles
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An

Inaugural Dissertation

On

Gasko-Enteritis

As it occurs in the

Malarious Districts of Maryland

Submitted

To the examination

of

The Provost, Regents, and Faculty of Physic

of

The University of Maryland

for

The degree of Doctor of Medicine

In the session of 1844-5.

By

Daniel Kent of Anne Arundel Co, Md.

To Doctor Samuel Chew. Professor of
Therapeutics, Hygiene, and Materia Medica
in the University of Maryland.
I inscribe these pages, as a testimony
of my regard. D. M. Mitchell

The frequent occurrence of Gastro Enteritis in the district of country in which I reside and indeed in all the malarious districts of Maryland; and the maltreatment to which it is often subjected by Empirics both within the profession and without, induce me to select it as the Subject of my thesis. —

Whatever may be the essence of malaria, or whether there be any such particular morbid exhalations as are usually contended for, I shall not here stop to enquire, and consequently shall pass over the mode in which such an essence, (its existence being admitted) primarily affects the human system. One fact I think will generally be admitted by all observant practitioners, who practice in those districts of our State where intermittent and remittent fever occur. Viz. that the Chylo-poietic viscera are most frequently involved in the morbid excitement. There are some causes sufficient perhaps to

account for this morbid action, without admitting the existence of any particular malaria, and true philosophy requires us when we have a cause sufficient to account for a given phenomena, not to trouble ourselves in seeking out other and hypothetical ones.

Our location is in the neighborhood of large collections of water, the evaporation of which under the burning rays of the sun, keeps our atmosphere constantly charged with an excess of humid vapour. Such an atmosphere is not so well calculated to remove the products of cutaneous transpiration as an arid one kept in continual circulation by constant winds, consequently there is a determination inwards and particularly to the minute vessels or exhalents of the Gastro Enteric mucous membrane, and to the kidneys which are obliged vicariously to assume the functions of the skin.

Our people too, are high livers they consume

vast quantities of nitrogenous food, and that of the most stimulating kind, bacon, salt fish, fresh fish, oysters, poultry, fat mutton &c &c. Now the lungs in consequence of the rarefaction of the air by the heat, and of the large quantities of moisture it contains, are unable to throw off this excess of carbon, the liver therefore the compensating organ, is obliged to assume an additional office in cleansing the economy of its excrementitious; hence arises supersecretion on the part of that organ. Now the physiological relation between the liver and the mucous membrane of the alimentary canal, is an intimate one, and they reciprocally act and react upon each other. Thus if the duodenum is morbidly excited, the irritation extends to the liver and supersecretion is the consequence, just as in the natural physiological state, the stimulus of food in the duodenum excites the afflux of bile, its chemical precipitant. When the liver from other causes becomes excited

and stimulated by hyperemia to secrete unusual quantities of bile, it acts as an irritant to the Gastro-Enteric mucous membrane, just as an unusual effulgence acts as an irritant to the eye, to which a certain quantity of light is the natural stimulus — In proof of these positions I appeal to the fact verified by the experience of every one, that in cool, dry, and windy weather, such as we have had during the past summer, the health of people has been unusually fine. When however the system is predisposed to morbid action by the operation of the above causes, all that is needed to kindle a fever in the system is an exciting cause, and this is generally applied to the Gastro Enteric mucous membrane. A full meal, a large quantity of cold water taken when the system is overheated, or some one of the many indigestible substances that are so inconsiderately swallowed by the imprudent, is the torch that sets fire to the combustible materials already accumulated. A fever sets in

of a remittent perhaps, but more usually of a continued type. Hence the disease bears some resemblance to what is vulgarly called bilious fever, and by unprofessional people and Empirical practitioners, the mistake is easily made. The consequence is, that the patient is led to believe that he is "Chuck full" of bile, and mercifully recommended to take a dose of calomel and jalap, or calomel and tartar emetic, with this advice he is sure to comply, but alas, he finds his fever increased as well as his pain by the very means he took to alleviate both, his tongue is red, breath foetid, he has great thirst, continual vomiting, epigastric tenderness, and dark coloured, or perhaps bloody motions. So far however from attributing this increase in the severity of the symptoms to his injudicious selection of remedies, he attributes the whole to an "overflow of bile", and repeats the irritating cathartic. Finding his patient getting worse, the Doctor bleeds him perhaps, then

gives a dose of morphia to allay the pain, next day finding his patient weak, he gets a blister over his whole abdomen, which as the disease is a strong one, it is allowed to remain on eight, ten, twelve, or perhaps twenty four hours. The patient grows weaker, the extremities cold, delirium, a coma supervenes, and cups are applied back of the neck. A liberal allowance of good brandy, and quinine close the scene. His friends declare he had a tremendous attack of bilious fever, which carried him off notwithstanding all the strong medicine he took.

Thus many a victim is immolated on the shrine of "bilious fever" The high priest who officiates at the sacrifice, having his mind filled with an overflowing gall bladder and a stream of calomel sweeping the bile from the clogged mucous membrane. Shade of the departed Rush, if thou couldst but see how the ignorant, or half informed practitioner, perverts

your doctrines and founds miserable practice on thy good precepts, what anguish would fill thy humane heart! If the sufferer happens to be a child, the poor little creature is obliged to undergo the operation of an endless list of remedies, which are declared to be "good for worms", till the cerebro-spinal axis is drawn into the morbid concatenation, and convulsions or coma place the patient, where the ignorant cease to trouble.

Having thus sketched the diseases with which Gastro-Enteritis is most liable to be confounded, and the injurious consequence of such a blunder; I shall next proceed to state the

Symptoms: A dull and heavy sensation in the Epigastric region, particularly after taking food, listlessness, inactivity, headache, rigors or only slight chillings, pain in the limbs, fever of a remittent, or continued type, great prostration of strength, injected conjunctiva, which has at times a yellowish

large; the countenance assumes an expression of anxiety and depressed state of the mind, the respiration is hurried, and at times there is a slight cough, breath fœtid, the pulse is frequent, somewhat full, usually compressible, though at times less, tongue loaded and white in the centre, red at the tip and edges. There is loss of appetite, nausea, retching, or perhaps vomiting, the ejected fluid being of a greenish or yellow colour, there is a heavy, dull and aching pain in the Epigastric region increased on taking a full inspiration, while in the umbilical region there is a sense of uneasiness which can scarcely be said to amount to positive pain; the epigastrium is at times so tender that the patient cannot bear the application of the hand, an almost quenchless thirst accompanies the disease and induces the patient to take large quantities of water which by distending the stomach, soon brings on

emesis. The bowels are at times constipated, occasionally the patient is teased by the frequent passage of bloody mucous, it will generally be found that the operations contain no bile. The urine is scanty and red, the skin hot and dry, with great restlessness and jactitation. In short each and every organ of the system seems to have forgotten its function, innervation is sluggishly performed, nutrition is not performed at all, and secretion is arrested, or its products so changed, that instead of accomplishing the object for which they were designed, they become irritants to the parts with which they are in relation. —

The opportunities for <u>post-mortem</u> in our section of country are very rare, because the disease if judiciously treated, seldom proves fatal, and when it does, there is so strong a prejudice against the operation that we can scarcely ever surmount it, even when our patient is a servant. The disease however

has been so thoroughly investigated by Broussais and his disciples, that little further can be said, as it relates to the gastro-enteric mucous membrane; if we add that the condition of the liver and spleen is such as is generally found in malarious districts, a very good idea may be formed of the disease as it occurs amongst us.

As to the <u>diagnosis</u>, there is no difficulty attending it; indeed in most instances, the character of the disease is so strongly marked, that there is scarcely a possibility of its being mistaken, even by the inexperienced.

The <u>prognosis</u> though generally favourable, must not be given without taking into consideration the constitution of the patient, and the circumstances by which he or she may be surrounded. If as is not unfrequently the case, your patient be a negro in an outhouse, where he is not subjected

to the controle of his master, or mistress, you may give an unfavourable prognosis, for the probability is that all your efforts during the day will be balked by a full meal of Johnny cake and fat bacon at night.

In the treatment of this disease the indications are two-fold 1st To calm the constitutional irritation 2nd To subdue the local disease. You will of course commence the treatment by putting your patient in the most favourable position for recovery. As the disease generally occurs in the summer months, your patient should be placed in the coolest possible place, where the advantage of a free circulation of dry air can be secured. Not only must all stimulants be abstracted, but all food however light, and unirritating it may be, must be withheld, for the physiological act of digestion is one of hyperæmia of the organs concerned in the process and this congestion attending the act of assimilation does not subside, even when the process itself is finished

, besides this the organs are not in a condition to perform their ordinary functions, being in a state of excitement; a customary stimulant becomes an irritant, and the unassimilated mass traverses the whole tract of the alimentary canal, each inch of its progress adding to the already accumulated excitability of the mucous membrane. I have known physicians whose fears of typhoid symptoms have led them to assert, that some food should always be given. If said they, rice is too irritating, give rice water, if that proves so too, arrow root &c. This fear is far from being well grounded, and if it were, pouring in aliments, when the stomach is in a state of inflammation, and incapable of performing its office, is but a poor method of supporting the constitution. I dwell upon this point, because it is inferior in importance, to nothing in the whole conduct of the case, and is perhaps the most difficult of accomplishment. The patient and his friends presume that

he is weak, and this weakness is always attributed to the withdrawal of food; and they combine to urge upon the Dr the necessity of allowing the patient nourishment; if now you have to deal with intelligent persons a very little pains will soon convince them, of the true situation of the patient and of the inappropriateness of all food. when however as frequently happens your patients are ignorant, and are surrounded by ignorant friends, you cannot be too positive in your injunctions, or too watchful to see them carried into effect, and at times your best efforts are destined to failure and your patient is lost through the officious and injudicious kindness of those by whom he is surrounded. Having thus placed your patient in favorable circumstances, and abstracted all stimulants, you must next consider the remedies to which we must resort for a cure - Bloodletting, general and local is undoubtedly the most important

remedial agent. It is a fact long known to the profession that the blood can be abstracted from the system in inflammations of mucous membranes, than in inflammation of the parenchymatous and serous tissues. The amount of blood drawn in a Gastro-Enteritis rarely exceeds twelve ounces; no general rule however can be laid down as to the amount to be taken, or the number of times the Lancet must be resorted to. The best way is to bleed generally, until you are convinced from the character of the pulse, that you can command it by the cupping glasses, which will generally require two or three bleedings, and then resort to local depletion, from which you may expect the most favourable results. The cupping glasses should be applied as long as the pulse will bear the abstraction of blood, in case the disease is not earlier subdued, and during the time of active excitement, the oftner, the better. Local depletion seems

to be even more efficacious in relieving the disease than any other remedy, after the constitution is prepared for it by general depletion; the patient often after the application of the cups, expresses himself relieved of the uneasiness, and nausea which renders the disease so unpleasant. During the treatment, it will be found that hot-poultices have a remarkable efficacy in soothing the system and subduing the local excitement. Dr Stokes disapproves of the poultices on account of their weight and heat. I have met with a very few cases in which the patients themselves objected to the poultices on these grounds, cases when they object, are exceedingly rare, and in general the patient is anxious for their application, and continuation. I have even them applied when the skin was exceedingly hot, and dry, and after a few moments, or hours, I should have said, of active poulticing, a general perspiration takes

place with great relief to all the symptoms.

With respect to purgatives to which Broussais and his disciples object in toto, I wish to observe that their use is absolutely indispensable. When I say this, I do not mean that cathartics are to be given with the idea of depleting the general system by them, but that they should be given of as mild and unirritating a nature as is consistent with the very important indication of thoroughly cleansing out the alimentary canal. It must I think be obvious to any one who reflects upon the nature of such cases, that acrid and indigestible substances in the alimentary canal, are the sources of more irritation than can possibly result from the action of such a cathartic as I have indicated. In our section of country it is important, not only to evacuate thoroughly the alimentary canal, but likewise to bring on secretions from the liver, which for the most part is torpid. To accomplish these

indications, I know of no remedy half as efficient-
as that in constant use by my preceptor - Dr. B. Carr
of Anne Arundel Co. I allude to the Hydrargyrum
cum Magnesia. A medicine in every way superior
to the Hydr. cum Creta, which is so generally popular
as an alterative. Doctor Carr, having frequently used
the Hydr. cum Mag. in the bowel complaints of infants -
with such decided advantage, was led to infer its value
in the present disease among adults. A trial soon
convinced him, of the correctness of his reasoning,
and since that time he has used nothing else in the
Gastro Enteritis of the District in which he resides.
I can of my own experience attest its efficiency as
a purgative. I have often used it in my own person
. It has never failed to operate mildly but expeditiously
, in every instance, cleaning out the canal, and bring-
-ing on secretions from the liver. In fact I am convinced
that it needs only to be known, and tried, to insure its

universal use. The dose is from xxx, to 35 grs — It will sometimes be found however that the bowels are too loose, your patient has frequent stools of a green or yellowish slime attended with tenesmus and tenderness in the umbilical and right iliac region. This circumstance, so far from contra-indicating the Hezdr, cum Mag, is an additional reason for its exhibition, for by altering the action of the mucipharous follicles and lines, it soon leads to the restoration of healthy dejections. At times however it will be found that there is too much irritation even for the administration of Hezdr, cum Mag. In this case you must withhold purgatives by the mouth, and resort to injections, which indeed are frequently indicated, even when the Hezdr, cum Mag, can be used with advantage. By the use of injections, bleeding, cupping, and fomentations, together with the use of ice, which must be freely allowed during the whole course of the disease; this state of hyperexcitement will soon subside when the

Hydr. C. mag. may be given with safety and advantage. You will frequently find your patient exceedingly nervous, restless, and in a state of continued wake-ness, here an anodyne would be of the greatest service, but opium in all its forms is contraindicated by the burning fever, the hot and dry skin of your patient. Fortunately we have in the Hydrocyanic acid an agent precisely adapted to the circumstances. It does not like opium dry up the secretions, nor its first action stimulant. It calms the pulse, lessens nervous irritability, stops the nausea, and relieves the sense of uneasiness under which the patient is suffering, by a purely sedative action. Dose 1 to 3 drops thrice die. It is not however till the excitement of the system has been in some measure relieved by bloodletting, that its favourable action is seen; when given at the proper juncture of affairs its action is almost heroic. When the skin is moist & cool, and the bowels not confined, Morphia may be given

with advantage. As it regards blisters I agree entirely with Broussais, that their action is less favourable in inflammations of the abdominal viscera, than in those of either the other great cavities, when however, in spite of all your efforts to the contrary, the disease continues to harass your patient after you have carried depletion as far as it can be carried with prudence, and the skin is cool and moist, you may then apply a blister and sometimes with good effect. As counter-irritants, they may be applied to the insides of the thigh or the calves of the leg, when as sometimes happens, the congestion of the viscera of the abdomen leaves the extremities cold, in consequence of being robbed of their circulating fluid. Sinapisms and mustard rubbed on the extremities however, will generally be found more applicable.

There is nothing perhaps in the whole practice of Medicine, that is more difficult to learn than the proper use of blisters, when as not unfrequently happens, they are

injudiciously applied, this action is very pernicious. It should always be remembered that they are stimulants of the organs over which they act, and consequently, this aid should never be invoked till stimulation may be deemed advisable.

When the disease has been subdued, and your patient be found emaciated and much prostrated in strength, the stomach is weak, and you cannot be too cautious with respect to his diet, and with all your caution, you will sometimes have to contend with cases of severe colic, brought on by indulging too freely in improper food. In this case you may resort to anodynes, or as I have seen done with the most beneficial effect, give some brandy, the stimulant, appearing in this case to assist the stomach in the performance of its long interrupted functions; after the pain is relieved, give a dose of oil, to remove the half digested aliments.

To invigorate the stomach and bowels, it is well to give some of the simple bitters. Eupatorium Perfoliatum is perhaps best adapted to the case. I have seen too, the following prescription used with advantage

℞ Ferri. Sulphatis - ʒij.
Ex. Gentian - - ʒj.
Ex. Tarax. - - - ʒj. M. d & ft Pil LX.

One before breakfast, and one at eleven o clock, or an hour before dinner — Sometimes a little port wine may be of great service.

An

Inaugural Dissertation

on

The Physiology of the Iris.

Submitted

to the

Examinations

Of the

Provost, Regents and Faculty of Physic

of the

University of Maryland.

For the Degree of

Doctor of Medicine

By

C. M. Owen

of Maryland.

Feby 1845.

The Functions and use of the Iris.

The structure, expression, and physiology of the eye, has occupied a large share of the attention and study of scientific men. - the admiration and wonder of every enthusiastic student of nature's handiwork, It is conceded to be the most beautiful and complex organ among the many which we find in the animal economy. To the Anatomist, Physiologist, & Philosopher, its structure and function is perhaps more interesting than that of any other part of the System. Here the anatomist has a fair field for the exercise of his skill in

displaying its delicate fibres and vessels, every part of it is rich with mystery for the Physiologist, – it is a model for the Philosopher in constructing an instrument by which he is enabled to hold communion with the rolling worlds, and trace them in their rapid flight. Its structure and design, is the invincible argument in the hands of the natural Theologian, by which alone he can beat back the blasphemous attacks of infidelity and establish the supremacy of the great God of the uni-
-verse.

Indeed if we consider the various parts that enter into its structure. – the beautiful adapta-
-tion of these to the object for which they were de-
-signed, – the utility and pleasure proceeding from its exercise, and the pain and unhappiness resulting from its injury or destruction, we must be deeply convinced of the consumate wisdom, and exquisite skill of its ma-
-ker and acknowledge it to be worthy of most unbound
-ed admiration

But the Physiologist cannot stop here; he is not satisfied with admiring the external structure and action - the beauty of construction: he passes be-hind the screen and seeks to unravel the mys-teries of nature. - and it is only the physiologist, who can wholly appreciate this wonderful exhibition of consummate skill. For he views it not merely as an isolated organ, but as one possessing the greatest extent of sympathy with other parts remote from it in the animal system. for it is not only the index - the barometer of the mind by which the coming storm is predicted, or the mild and placid calm, but also, it often on account of its sym-pathies sounds the alarm of approaching or exist-ing disease.

As it would be difficult, not to say impossible to give a clear and intelligible descrip-tion of the structure and uses of an isolated part of a complicated piece of machinery, As we find it

in attempting to treat of the iris, our entering into a brief description of the other parts of this organ, should not on this account, be deemed superfluous and un-
-necessary.

The most important and especial part of the organ of vision is the Retina. this is an ex-
-pansion of the optic nerve, it constitutes a mirror which reflects in most beautiful and accurate min-
-ature all external objects, it is evident that in or-
-der to the production of this minature, it is necessary that rays of light proceeding from any object should not come in parallel lines, but should be refracted or changed in their direction, so that they may be con
-verged before striking upon the Retina. this is effect-
-ed by three transparent humours in the form of lenses of different convexities so admirably construct-
-ed as to bring the focus upon the retina, the humours have their names and positions as follows, The A-
-queous, which is placed in the anterior part of the

eye, the Chrystallin, behind the eye, and the Vitreous posterior to the chrystallin, and occupies the greatest part of the globe of the eye, all these are sustained and kept in form by their own peculiar enveloping membranes or capsules, and preserved from injury by the sclerotic coat and the Cornea.

The former is a white, firm & fibrous membrane, which extends from the insertion or entrance of the optic nerve, to the margin of the cornea occupying at least five-sixths of the eye-ball

The cornea is the transparent chrystal of the eye, horny in its consistance, yet as transparent as the clearest flint glass. — It is admirably adapted by its transparency to transmit the rays of light, and by its firmness and resistance to guard the delicate membranes and humours. — Under the Sclerotic we find a black coat called the Choroid, which is stained by a colouring matter or pigment, this being situated exterior to the Retina is well calculated to

absorb all the superfluous rays of light which would otherwise by over stimulation, injure its texture, or impair its functions, from this our astronomers borrowed an idea in the construction of the telescope, and finding that some of the rays of light which entered the tube instead of passing directly through the different glasses to the eye struck against the polished sides of the instrument, thus - by confusing the object by the multitudinous reflections the inner surface of the tube was blackened, when it was found that the former difficulty was obviated

The quantity of light admitted into the eye is very varied, - being sometimes quite small and at other times much greater in degree; it is therefore obvious that some means must be provided for the more perfect regulation of the number of rays which should be admitted to the Retina

The Iris was placed in the organ for this purpose. — This may be described, as being a thin, flat, circular membrane, or curtain, stretched

across the eye, having a circular aperture near its centre, it floats in the aqueous humour, this opening is observed to be nearer to its nasal than temporal portion, — this curtain assumes different colours in different individuals, being in some grey, in others blue and frequently almost black — these are the most usual primary colours, there are besides an almost infinite variety of shades between them,

It divides the anterior portion of the eye into two cavities or chambers, The space between the posterior surface of the cornea, and the anterior surface of the Iris being the anterior chamber of the eye: while that space which exists between the posterior surface of the iris, and the anterior surface of the Chrystalline capsule is the posterior chamber, the aqueous humor fills both of these chambers and can pass freely from one to the other through the perforation in the iris. this is called the pupil and is observed to vary greatly in appearance

in different animals: in man it is nearly circular, in the of a transverse oval,- in the cat a vertical one.

The greater circumference of the iris is attached by the ciliary ligament to the choroid coat, this ciliary ligament is a soft whitish ring or band also connects the choroid to the sclerotic coat. Its nature is not ascertained, alth' it is commonly believed to be cellular. Cloquet thinks it probably a nervous ganglion, inasmuch as it sends filaments into the iris. The outer border of the iris is much stronger than its inner margin, which surrounds the pupil, and which here forms a very thin edge. It has been a matter of dispute whether the iris on its outer surface be flat or convex. Meckel says it is flat, but Mr Laurence maintains that it varies in different subjects. It is on the anterior surface of the iris that the peculiar colour of the eye resides which as before observed is very different in different persons. It even varies in the same individual

the right eye is sometimes of another shade than the left, the superior half of one is sometimes differently coloured from the inferior, and there is spots of various hue dispersed along the whole circumference of the membrane. Lawrence remarks that the colour of the iris is unvaried in all wild animals of the same species and we know that when they are domesticated, that, both the general hue of the eye and the colour of the iris become changeable, tho' not to the same extent as in human subjects.

The colour of the iris seems in some degree to depend on that of the whole body. Thus in persons of fair complexions & light hair, the iris is usually found to be blue whereas in persons of dark and swarthy skin, we usually find darker shades, and sometimes almost black this is so much the case with negroes, that it is sometimes difficult to distinguish the pupil.

The colour of this membrane seems to

be one of the distinguishing traits of various nations. The Germans have generally fair complexions, light hair and blue eyes: while the Turks, Celtes & Sclavonians have very dark hair & dark Iris. The posterior surface of the iris is cov-ered by a very dark pigment, analagous to the pigmentum nigrum and the Choroid. but in some animals, as the white rabbit, and in some people called Albinos, this pigment is wanting both in Choroid & Iris, and it is from this deficiency that we can see the red vessels of these mem-branes through them giving the iris a rose colour. In this variety of the human species, the skin is of a morbid silk-en whiteness, and the hair also of a dead white. These persons have almost always defective sight & always avoid exposure to a strong light.

The Iris is very plentifully supplied with blood vessels & nerves, its arteries are derived from the Ophthal-mic, and are termed ciliary. They arise below the cil-iary ligament, and form arches upon the iris. the veins which return the blood correspond with the arteries, but

some pour their contents into the vasa vorticosa. When we examine the nerves of the iris, we shall find them to be exceedingly numerous: more so, perhaps, than in any other part of the human body. These are derived from the ophthalmic ganglion, which is seated on the outer portion of the optic nerve, and which sends out sixteen or twenty filaments that pass between the choroid & sclerotic, and penetrating the ciliary ligament are distributed on the iris.

This ganglion receives filaments from the third & fifth pairs, and it is supposed by some to be constituted by these nerves, but it is very obvious however to any one who examines the subject carefully that it belongs to the sympathetic system. This conclusion is warranted by the appearance of the ganglion itself, not only, but also from the fact that it is connected with the superior cervical ganglion by means of a branch which it sends off to the nasal nerve. This latter also sends two or three fila-

ments to the iris which are not connected with the ganglion, and in cases where persons have been able to control the motions of the iris it is probable that volition was conveyed by these filaments to the 5th pair.

With regard to the structure of the iris there has been great diversity of opinion. Meckel remarks that after the most perfect injections it seems to be composed of more, or by yellowish white fibres. which appear to be the seat of motions executed by this membrane. In living subjects these fibres are very apparent and seem to be divided into an external & internal circle, the latter appearing to be the most highly coloured. The fibres in the external circle are straight and run from its outer circumference to that of the inner. These are very strong in the eye of the op. Dr Jacobs says. the opening is immediatly surrounded by a well defined circle almost the twentieth part of an inch in diameter. — this is what has been called or de-

-scribed as the orbicular muscle of the pupil, When we place the eye in a strong light the iris contracts and the pupil is diminished in size, but in a darken-ed room it is enlarged. How shall we account for this phenomenon. It is evidently owing to the action of the abovementioned fibres, but there is much dis-pute as to their muscularity. — Some contending that the enlargement or diminution of the pupil is to be ascribed to the contractility of the fibres, while others believe it to be owing partially to elasticity and thus explain the dilitation. If the latter was the case, as elasticity is a property of dead as well as living mat-ter the pupil should always be dilated after death, which is not so, — In general the contraction of the iris, or diminution of the pupil is regarded as an active and the dilitation as a passive state, tho' some think them both active, and Meckel supposes, dilitation to be the active and contraction the passive state. — Are these fibres really muscular: in order to satisfy this question we

must consider what are the properties of muscular fibre, or in other words what properties or qualities must be present in order to entitle a part to the appellation of muscular. Is colour sufficient: if we examine parts whose muscularity all admit, how different do we find them in this respect: the muscles of animal life are red, the involuntary ones, as the bladder, intestines &c. though well supplied with blood are pale. in the muscles of inferior animals whose systems are supplied with white blood the same difference is observed,

The appearance of the fibre seems to afford little evidence of its muscularity, since the anatomists of the present day are not agreed as to the nature of the fibre of the uterus, although from their great size a proper determination would not appear to be a matter of much difficulty — there is the same difference of opinion with regard to the arteries, some have attempted to solve the difficulty by endeavouring to ascertain whether the organ in dis-

-pute contained fibrin, this it is true is the charac
-teristic constituent of muscular fibre, but when we
consider the difficulty of analysing organic compounds
and particularly in small quantities, and also reflect that
albumen, gelatin, & fibrin pass into each other by insen-
-sible gradation it is easy to perceive that chemistry
can give little aid in ascertaining the presence of mus-
-cular fibre. Do not some muscles at first exist in
an imperfect or rudimentary form, this is certainly the
case in the unimpregnated uterus, although its func-
-tion in pregnancy, reveals its muscularity some organs
acquire a great increase of fibrin in hypertrophy of
the part, as the bladder from stone &c. Sometimes the
fibrin becomes so much wasted by disease that a mus-
-cular part loses in a great degree its appearance, so as
scarcely to be recognized.

Would all the usual appearances of muscle
warrant us in pronouncing a part to be muscular, were that
part destitute of contractility? certainly not. And hence it

would appear we should look to this characteristic of muscle in fixing the nature of any part suspected to be muscular every muscle voluntary or involuntary has its contractility thrown into exertion by stimuli — the muscles of animal life respond to volition, exercised through the nerves of the brain and spinal marrow. — The muscles of organic life on the contrary are entirely regulated by the great sympathetic, and each organ has its own appropriate & peculiar stimulus. — Thus the blood stimulates the heart, urine the bladder, food the stomach, & light the iris, This last may be considered as belonging to the sympathetic, as it receives nerves from it & its motions are involuntary like those of muscles supplied from it.

It would seem sufficiently evident, that the motions of the iris are in every respect analagous to those of other muscles, thus strong light induces it to contract, narcotics which destroy and enfeeble contractility in other muscles affect it in the same manner. Bella-donna will so enlarge the pupil that the iris will form

only a narrow ring behind the cornea, so narrow that it is sometimes scarcely perceptible. In cases of profound drunkeness. when from debility, all the muscles are relaxed, the pupil dilated, This too occurs in Hydrocephalus & Aploplexy, where from pres-sure on the brain, the nervous influence is not transmit-ted to the muscles, & paralysis is induced, as was remark-ed before, the iris belongs to the class of involuntary mus-cles, these though not subject to volition are never-theless under the influence of the passions, Thus the heart by anger is stimulated to increased rapidity of contraction, while fear and anxiety interrupts its action & alters the function of digestion. Fear especi-ally affects the kidneys causing increased secretion whilst grief exerts a more pernicious influence over the biliary secretion.

I have seen the pupil greatly enlarged under the influence of fear, the two great nervous

systems are intimately associated in many respects, we often see how readily irritation excited in one system of nerves extends to the other — When the abdominal viscera are disordered how quickly does the iris evince its sympathy & reveal the derangement of the distant organs, of this fact we have familiar illustration, in case of worms! We occasionally find the iris subject to volition as is sometimes the case with other involuntary muscles as the heart &c. In the case of the iris it is most probable that volition is transmitted through the nasal twig of the 5th pair. I have seen an individual who possessed the power of dilating or contracting the iris at pleasure in a very striking degree It has already been sufficiently proven that the iris is muscular and like all muscles has its state of action & relaxation, that it responds to certain stimuli, & that agents producing certain effects on other muscles, have similar effects on it, it is moreover sometimes subject to volition

and we know of no part which can be contracted or relaxed at pleasure that is not muscular.

The iris of one eye is intimately associated with that of the other both contracting and dilating the same time: but when the parts are influenced by disease this sympathy is destroyed. thus in paralysis of the retina. the iris is usually insensible, but may be made to contract by stimulating the retina of the healthy eye, light thrown on the iris alone will not cause its contraction, but it is necessary that it should impinge upon the retina, hence if we may so speak the iris plays the porter to the retina & admits only that quantity of light which may be necessary for the painting of a perfect image upon it,

It has been a question with Physiologists whether the motion of the iris is independent of the retina, or is merely caused by the sensation produced in this latter membrane by light & consequently to be classed with sympa-

-thetic action. Baron Larrey supports the former opinion & adduces many instances to sustain himself. It would appear from the fact above stated that in the healthy & natural condition of the eye, that the motions of the iris depend on the iris retina, but in disease, the retina often loses its power & vice versa. Baron Larrey relates two very interesting cases of injury done to the retina & iris of two soldiers, who had been observing a solar eclipse one of them used a darkened glass with a small transparent spot in the centre, through which the rays falling with intensity upon the retina alone destroyed it without injuring the iris. The other soldier used glass darkened in the centre & transparent in the circumference here the motion of the iris was destroyed, whilst the mans vision was only slightly impaired, the retina being protected from the rays by the blackened centre, Another case is related by the same author, of paralysis of the iris produced by a blow on the orbit, where the vision still remained perfect. In another instance where the individual saw well, the iris could only be

made to contract & then feebly, by exposure to intense light. — In some cases of cataract where from the great opacity of the lenses, the light cannot reach the retina the pupil remains immoveable & it is then recommended not to operate. such advice has probably been given from the idea of that the iris has lost its action in consequence of the insensibility of the retina. But such counsel is not always judicious, for Baron Larrey has successfully operated in several cases of this nature, in many cases of cataract also, where the blindness is almost entire the iris preserves its motion. From all these facts it is evident that in the perfect & healthy condition of the eye there is a strong and intimate sympathy between the retina & iris, but that in disease this association may be destroyed and that one of these membranes may retain its functions, while the other is paralysed and useless.

By what means then is the stimulant impression of light on the retina, conveyed to the iris? It is im-

-possible to answer this question in the present state of our science. it is probable however, that it is by means of the sympathetic nerve which accompanies the ophthalmic artery into the eye. & which probably extends its influence to the nervous expansion of the optic nerve. — The sympathetic nerve is connected with the ciliary ganglion and from this, branches are sent to the iris as before stated. The impression on the retina is thus conveyed by the nerves surrounding the ophthalmic artery to the ciliary ganglion, from this to the ciliary nerves and by these to the muscular fibres of the iris, when a contraction of these fibres is occasioned, & a consequent diminution of the pupil produced.

A very proper Dissertation

Inaugural Dissertation

containing

"Observations on Puerperal Fever."

submitted to the Faculty of Physic,

of the University of Maryland.

For the degree of

Doctor of Medicine

by

Charles Frick,

of

Baltimore, Maryland.

Balt. Med. Coll.

January 1st 1847

To

Thomas H Buckler M D.

As an expression, of my remembrance, of the value
of your instruction, and my attachment as a friend,
I respectfully inscribe, the following remarks.

Sept. 1844. Chas. Frick.

Observations on Puerperal Fever.

Having been, during the past year, much interested in some cases of puerperal fever, that occurred during my residence at the Baltimore Alms House, I have selected this disease, as the subject of my inaugural dissertation, because I wished to offer an article if not original, at least containing something drawn from my own observation, at the bed side of the patient.

The first thing, offered for our consideration is whether puerperal fevers, ever follow childbirth, without a lesion of the peritoneum, uterus or its appendages; and to decide this question satisfactorily, we are to consider, whether such a thing, as ephemera, has any real existance.

The older writers, at a loss to account for many of the disorders of the human economy, included a great many, under the general term of fever, and as many

of these, one of course slight, as regards their duration, ephemeral fever, was one, which was universally recognized. Modern, and certainly improved pathology, has taught us, that mere fever, without local disease, is of very rare occurance; and that fevers are but of two classes, primary, and Symptomatic. The first must have a regular increase, and decrease, and the whole System is involved, altho' local disease often springs up in its course. In the last, it is merely an expression of a local disturbance.

Under the first, are included, Typhus; Typhoid; Remittent, and its variety Intermittent; and Yellow fever. Consequently, when these Symptoms of ephemera arise, we endeavor to ascertain the local lesion, of which it is Symptomatic; and if we fail, we ascribe the failure, rather to our imperfect diagnosis, than to the existance of another unrecognized form of essential fever.

A late writer, on this Subject says, "Adults sometimes in consequence of great, or protracted fatigue, and children

still oftener, from inappreciable causes, are attacked with head-ache, loss of appetite, debility, and general febrile excitement, not referable to any local lesion; which symptoms, after rest for from one, to two, or three days, either with, or without medicine, usually subside, leaving the individual in good health. But whether, this kind of disorder, should be looked upon as a distinct, established form of fever, seems to me, to say the least of it, very doubtful."+

In no condition, was this ephemera supposed to frequently to arise, as in the Puerperal State; and we find, but a century since, in speaking of the sequelae of labour, the differential diagnosis, given from milk fever, and nothing said about any other disturbance. After these came a host of other writers, who detecting the violent, and dangerous inflammation, that sometimes subsequent, and the proper means, for its subdual, still looked upon it, as distinct, from the so called ephemera, and even in the more recent works of Midwifery, it is spoken of in the same way.

+ Preface to Bartlett's Typhoid, and Typhus Fevers.

Now we advance, that no such thing as ephemera has any real existance; and of course, admitting that if exposed to any of the predisposing, and exciting causes, any of the above mentioned essential fevers may arise; yet, that all thus will be symptomatic, and of those connected with the state of childbirth, but two can be distinguished; these depending, on the irritation caused by a disordered secretion of the mammary Glands, and the distention of the breasts; the other, an inflammation of the peritoneum, the uterus, or its appendages.

This last, has been included under the name of puerperal fever. The frequency of its occurrance, in proportion to the births, it would be impossible to know from anything but numerical statistics, and I am not aware, that enough of these have been registered, to give us correct data. The disease depends so much on contagion, and an epidemic influence, that its prevalence is exceedingly variable. It usually commences with a chill, from one to

eight days after delivery; altho' the chill is an uncertain symp-
tom, usually amounting, as it often does, to a sensation of cold-
ness, which may, or may not, have been perceived by the patient.
About the same time, the woman complains of abdominal pain,
very variable, both as regards extent, and intensity, so
that their detection is at times difficult; being sometimes, so
slight, as not to be perceptible without pressure, at other
so intense, that the weight of the bed clothes is insupportable.
In this disease the pulse is one of the best characteristics.
Blundell says, that it is scarcely ever as low as 115 in the
minute, unless an improvement is taking place: but generally
120, 130, and upwards, and "that if when puerperal fever
is prevalent, a few days after delivery we find the pulse
rising up to 130, and 140, it will be almost pathognomonic.
Pain in the head, and suppression of the lochia, altho' not
constant, are still frequent symptoms. This febrile action
speedily subsides, and is followed by prostration of strength,
collapse, and death. This is a general sketch of the

disease, but post mortem appearances shew us, that different parts of the uterus, or its appendages, may be involved seperately, and on closer examination, we find that these will give rise to some constant alteration in the Symptoms. Lee has divided them into four different heads.

1st. An inflammation of the Peritoneal covering.

2d. An inflammation of the uterine appendages.

3d. Inflammation and suppuration, of the absorbent vessels, and veins.

4th. Inflammation of the proper tissue of the uterus.

In the first, the pulse is more tense, small, and frequent, than in the other varieties. The countenance expresses great prostration, and the patient lies on her back, while her legs are drawn up, to relax, and prevent the tension of the abdominal muscles. The pain is felt over a more extended surface, and the abdomen is almost always tympanitic. It is apt to be confounded with intestinal derangement, or after pains. But the first is not so frequent in its occurrence, as some writers have represented,

and is more apt to occur after the lapse of a week, or ten days. The pain is not so acute, as in peritonitis, but more like cramp, and is generally preceded by evidences of intestinal derang-ment, as diarhaea, vomiting &c. The pulse is scarcely ever altered, at least if it is, it wants the characteristics of peritonitis. The same is the case, with the other, and there are also complete remissions in the pains, which is never the case in the disease we are considering. The post mortem ap-pearances are very uniform. The peritoneum is vascular, red, and apparently thickened, and the viscera adhere to one an-other, by an effusion of lymph, or there is an effusion of serum, with flakes of lymph, or pus, in the cavity of the peritoneum. In some cases, "the intestines are agglutinated, including the omentum, which is often of a deep red color, and highly vascular."+

In considering the second form, we find that alth-ough the peritoneal covering of the uterus, is rarely inflamed, without the appendages being involved; yet the reverse

+ Dr Clarke, See Nunneley, page 54.

does not hold true; for thre may be extensive disorganization of the last, without the othr participating. The surface of the broad ligament, ovaries, and fallopian tubes, are found red, vascular, and embedded more or less, in lymph, and pus. The loose extremities of the fallopian tubes, of a deep red color, softend. and deposits of pus, in their subperitoneal tissues, as is also the case with the broad ligaments. The Stroma Sometims enlarged, inflamed and containing pus. The diagnosis of this form, from the preceding, is difficult, but the pain is gennally less acute, and seated in one, or the othr of the iliac fossae, extending thence, to the loins, anus, and thigh, while the Symptoms remain the Same.

The third divisim, is so infrequent, that a diagnosis can Scarcely be formed, but we find on examination after death, the large absorbent vessels, passing upto the receptaculum chyli, filled with pus.

Lee's fourth divisim, inflammatim, and Softning,

of the proper tissue of the uterus. This I have placed last, be-
-cause I think that more than any of the other forms, it is lia-
-ble to be miscalled ophemera. Considering the violent, and sud-
-den change, that the uterus is subjected to, at the period of
parturition, it would seem that scarce a birth can occur, with-
-out some lesion to this organ. Some are so slight, that they run
their course without being perceived, others ~~are~~ so violent, that
they are immediately recognised as of grave import. This le-
-sion is distinguished from the other varieties, by the more fre-
-quent alteration in the lochia, both as to quantity, and na-
-ture, and the pain being only perceived, when deep pressure
is made, so as to reach the uterus itself. The tongue is
more to be relied on, than in the other forms. The Stomach seems
to sympathise with the inflammation to a great degree: there is
generally nausea, and sometimes vomiting; the prostration is
more complete, as evidenced by the expression of face. The
mode of attack differs from the other forms: when the peri-
-toneum, or the appendages of the uterus are involved, the attack

is generally Sudden. We leave the patient doing, as we think well, and return in the course of a few hours to find the patient disease, already far advanced. But the last, commencing, as it necessarily does, from the first moment after the expulsion of the child, has always been present, and increased gradually, and if we fail to recognize it at first, it is the fault of our diagnosis. We find a parallel to this, in bronchitis, pneumonia, and pleurisy. In the first two, as when the uterus, and its lining membrane is involved, the pain comes on gradually; but in pleurisy, as in peritonitis, the pain is almost always Sudden, and felt at the commencement of the attack. The diagnosis of this form, is important, in regard to one point of the treatment. We wish to produce the same impression on the disease, in both cases; but as an inflammation of a Serous membrane seems to afford a protective influence, we would not arrive at a correct result, by drawing blood in both cases, while the patient is in the same position. Consequently when the peritoneum is inflamed,

we may bleed in the sitting posture, but when the uterus, or its lining membrane is involved, while she is lying down. Nearly all the well marked cases of this variety have proved fatal, and the autopsies have revealed to us, both, the mucous lining, and serous covering of the uterus in a state of inflammation. In the last, an effusion of lymph, or under it, pus, which is sometimes infiltrated between the fibres of the muscular substance, which is disorganized, and broken down. The most common place for inflammation to arise, is where has been the attachment of the placenta, and near the cervix uteri.

How many cases do we find, in which there is slight acceleration of pulse, with pain in the head, and limbs. Slight pain over the hypogastrium, and the lochia somewhat altered in quantity, which are called ephemera, and treated as such. If the mucous lining, constitute a principal part of the lesion, the constitutional disturbance, may be but small, as is the case often in bronchites, or intestinal derangement. The pain over the hypogastrium, may be mistaken for

soreness after delivery, and the quantity of the lochia, so slightly changed in quantity, as not to be remarked. But the thirst which is always out of proportion to the febrile Symptoms, ought to put us, on our guard. Most of these cases would get well under negative treatment, and the practitioner goes away, not knowing he has been treating a metritis, instead of an imaginary disease. From my own observation, I do not hesitate to say, that meeting with the Symptoms above described, however trivial they might be, I should suspect an inflammation of the uterus, or its surrounding membranes, and treat it accordingly.

Another form of puerperal inflammation, is when the uterine veins become inflamed. The Symptoms differ but little from the preceding, but there is more tendency to delirium, and incoherence of Speech. Generally to the other organs, as the Lungs, heart, liver, and Spleen, Sympathize more quickly, with the disease, than in the other forms. In some cases, destructive inflammation of the eyes has occur-

-red a few days before death, and Cruveilhier reports a case, wherein the nose became black, and gangrened. Fortunately for us, practically speaking, the treatment is nearly the same as the other, the indication being to treat the inflammation actively, from the onset. On post mortem examination, the uterine veins are found filled with pus, and sometimes the cavities, and joints of the body, containing more, or less, of the same substance.

Still another form of puerperal fever, is when the symptoms are latent, when the disease creeps on in an insidious manner, and the abdominal inflammation, is totally masked by an oppressive languor, and a diminished sensibility of the nervous system; yet, in these cases, altho' the patient complains of no pain, the danger may generally be detected, by the great frequency of the pulse, quickened respiration, uneasy sensation at the pit of the stomach, and by the patient shrinking, when pressure is applied over the abdomen. I have even heard one, or two,

cases often, so masked, that the pulse was scarcely at-
-tended, either, as regards frequency, or force. Some practitioners
place great reliance on the alvine evacuations, and have at-
-tempted to diagnosticate this form of the disease, from these
alone; and when they observe dark discharges, resem-
-bling somewhat coffee grounds, when they have reason
to suspect puerperal fever, they are confirmed in their
opinion. This appears to me a very unsatisfactory, and
certainly a very unphilosophical means of diagnosis, for
there is not, and cannot be, any safety, in practising
medicine by a rule, and of those cases, that have fallen
under my observation, I have remarked the discharges
as often of another color, as the one above mentioned.

Dr Bird, in the Edinburg monthly Journal, has
lately communicated some cases, of neuralgia of
the uterus, simulating very much puerperal fever, and
which have no doubt, often been mistaken for it, an
error of immense importance, as it would seem, that

the measures, adopted for the one would be highly injurious to the other. In the first place, the pain is always present in paroxysms, and usually occurs in a female, who has been previously the subject of uterine irritation, as leucorrhœa, painful menstruation, &c. The pulse may be small, and rapid, yet it will not be tense. The lochia may be stopped, and the tongue coated, but we will find the pain over the uterus only imaginary. This is almost diagnostic, for it will be complained of as much, when pressure is about to be made, as when it actually is made, and if the attention be diverted, it may not be perceived.

Having given a sketch of puerperal fever, and its different varieties, I will now give an account of two of the cases, that fell under my observation, during the past year; the one of inflammation of the peritoneum, the other where the uterine appendages, with the uterus, was involved.

Mary Foot, colored, aged 25, was confined on Tuesday night, with her second child, and appeared to be doing

well, until Thursday morning, when She complained of great pain, and tenderness, on the slightest pressure, over the lower part of the abdomen, intense headache, and hot burning skin. The expression of her face indicated great anxiety, and the pulse was small, rapid, and wiry. Great thirst, tongue slightly furred, and red at tip, and edges. She was bled, cupped, and calomel, and opium administered, and in the evening; being no better, She was bled again. The next morning, her symptoms, continued nearly the same. The lochia were almost entirely suppressed, and the alvine evacuations of a natural color, but more fluid than in a healthy state. Saturday morning, there being no improvement, She was bled again, and appeared better, but the next day, She commenced to sink, and continued to do so, 'till Monday evening, when She died.

On examination, the intestines were found much distended with gas. Their peritoneal coat, as well as that lining the lower anterior part of the abdomen, as with as that

on the posterior part of the uterus, was in many places vascular, but more generally pale. In the cavity of the peritoneum, rather more than a pint, of yellowish serum was found, containing numerous flocculi of lymph. The interior of the uterus, was of a slate color, here, and there, dotted with red, the mucous membrane softened, and easily reducible to a pulp, by one or two passes of the scalpel. The ovaries and broad ligaments, much injected, and swollen. The uterine veins enlarged, some to the size of a goose quill. The inferior cava, the iliacs, and femoral veins, deeply dyed of a pouplish hue, containing no clots, nor anything but a little reddish serum.

Susan Hook, unmarried, aged 20, and of a particularly nervous temperament, was delivered on Sunday morning, after a painful labour, of her first child. In consequence of a flooding, the hand, and arm were introduced to restrain it, she had the next day, some headache, slight increase in the force, and frequency of her pulse,

and great thirst. On Tuesday night, she was found with a small, rapid, tense, and very full pulse, 135 in the minute, headache, an anxious expression of face, lying on her back, with her legs drawn up, with great tenderness, and pain in the left iliac region, and hypogastrium, so that she was unable to bear the pressure of the bed clothes. These symptoms, had been preceded by a slight exudation of chilliness in the morning. She was bled, till her pulse responded, and calomel, and Opium, given. After the lapse of two hours, she was seized with convulsions, followed by so much prostration, that powerful, and repeated stimulation, became necessary to keep her from sinking. The next day, she complained of no pain, except on deep pressure, over the region of the uterus, and that but slightly. Her pulse was nearly natural, but rather frequent. At night, the convulsions again occurred, and afterwards, the same stimulation, had to be resorted to. The lochia al-
-ths' not diminished in quantity, were of a dark color, and a foetid smell, the next two days, and of a light greenish

color. The next morning, She appeared better, though very weak. She now complained of pain in the right iliac region. From this time, She complained of great prostration, commenced to shit, and expired on Sunday night, in spite of every kind of Stimulation.

Autopsy, ten hours after death. The omentum tucked into the pelvis, was much injected. The rest of the abdominal investment, was unaltered, except a small part, adjoining each ovary. That covering the uterus was unaltered. The Sac contained an ounce of red liquid, and its lining membrane was covered with an extensive layer of lymph. The previous situation of the placenta, was seen more elevated, than the surrounding portions of tissue, and was loose, and Spongy, in arrangement. Both ovaria, externally were of the darkest purple, with here, and there a large vein, coursing over the surface. The uterus internally, was not so vivid as without, and the tissues were not softened. From these organs and out of the veins, pus could be expressed, and individual

vein of the uterine plexus, yielded a small portion of purulent matter. Both fallopian tubes were found in a similar condition, even to their fimbriated extremities. The examination could go no further.

A case similar to the last, is found recorded on page 97, of Andral's Medical Clinique, but the attack did not supervene so early after delivery, nor are the symptoms of nervous prostration, so well marked.

An important omission heretofore, of the writers on this disease, would seem to be, that they have not called sufficient attention, to the influence of the nervous system; the vascular system is held to be all in all, every thing is inflammation, and the powerful effect of altered nervous energy, in the production of disease, or the aggravation of it, when established, is lost sight of. This is shown in the case of Susan Hook, as well as, in that recorded by Andral; and it does not seem surprising, that it should be the case in this disease, when we reflect upon the temperament of

those attacked; female, in whom the nervous system is more impressible than in men, and are rendered particularly irritable, by the severe pain, which they have already endured; many of them, unmarried, shrinking through shame, and without friends to cheer, and support them, in this most arduous struggle.

We have now considered puerperal fever, in all its varieties, and its probable identity with the so called phlegma, it only remains to give a short discription of milk fever, and to shew the difference between the two.

In all women, about the third day, after delivery, there is a degree of arterial, and nervous disturbance, resulting from the important process, which is established, at that period, for the nourishment of the child. When the breasts begin to be distended, with the lacteal secretion, there is often a slight shivering, the head feels oppressed, and painful, there is thirst, and a slight increase of the pulse, and in the temperature of the skin; but in a few hours, these symptoms

gradually subside, and in numerous instances, the disturbance is so slight, that it scarcely attracts attention. But in other cases these symptoms, are aggravated to an extent, which often threaten the patient's life, and demands from the practitioner, the most anxious attention. In these severe cases, "there is usually a well marked precursory rigor, followed by pain, throbbing of the head, and intolerance of light. The pulse is rapid, full, and hard, the skin hot, and dry, great thirst, and the tongue dry, and coated. If such symptoms, are not speedily alleviated, the milk is no longer secreted, the breasts become flaccid, the cerebral symptoms more severe, there is violent delirium, and meningitis appears to be established." +

The diagnosis between puerperal fever, and the more simple form of this disease is easy. In the latter, the lochia are wholly unaltered, even in the gravest cases, while in the first, they are almost always so; there is no tympanites, nor is there any pain over lower part of abdomen; the breasts are always painful, and distended with milk, and the

+ Library of Practical Medicine, See Puerperal Fever.

disturbance is subduced by simple, and genually local treatment, which is never the case in the last. In the grave cases of milk fever, it is somewhat more difficult, but the severity in this instance, consists in the cerebral symptoms, while in the other, they are never prominent, unless the abdominal symptoms are so severe, as to admit of no mistake in the diagnosis. These two rarely coexist, so that a mistake from this cause is not probable.

Attempted Explanation of the Disease. From the time of Dewees, to the present, this disease has been looked upon, by nearly all writers as a local inflammation. But on due consideration, we find it differs from other inflammations, in other particulars, beside those arising from difference of texture, and situation. Dr Fordyce says, that "the suppuration when it occurs, is very different in its effects, from that, which take place in other inflammations, for the pain goes off suddenly, and sometimes the soreness; but the tumefaction continues, the pulse becomes more frequent, the strength is more depressed, and the patient is cut off, in from six to twenty four hours afterwards."

the same Symptoms, that would arise, had gangrene taken place. And the difference is, its prevalence at particular seasons, and times, without any assignable reason, its rare occurrance in a Sporadic form, and its contagious nature from one female to another, through the medium of the Physician. Of this we have ample proof, not from one, or two probable cases, but from a large number, recorded by Gordon, Ney, and others.

During the past year, Thomas Nunneley, in a work on Erysipelas, has advanced, that Puerperal Fever, is only one form of a diffused inflammatory action, which when exhibited on the surface of the body, is called Erysipelas. In support of this view, he adduces many reasons, most of them upheld by observations of his own during the past eleven years. Many of these reasons, show that his idea is exceedingly probable, yet against them, very forcible objections, I think might be urged; and, as the whole, we need a much larger number of carefully observed, and recorded cases, before pronouncing on the identity of these two diseases. For in the present era of medicine, there

being already so many theories, that have been hitherto advanced, and, admitted, by prejudiced, or careless observers; and which we now know to be untenable, that it becomes us, not to acknowledge anything, which is not supported on the broad, and sure basis of fact.

"To go back, however; In the first place, he says, "Puerperal Fever, resembles Erysipelas, in the nature of the Symptoms, shown throughout, the course of the disease, and also in the mode of its onset." This, I think, is of little weight, inasmuch as they are both inflammatory affections, and in regard to the general Symptoms, would necessarily differ but little. Next, "That the treatment in both forms of the disease, must be guided by the same indications, generally, it being improper, to employ active bloodletting in either." This we know is not true, in regard to Puerperal Fever, for in a decided case, our chief reliance is to be placed on active, and copious venesection. "Both forms of complaint, arise under the same circumstances, occur at the same season of the year, and prevail epidemically, in Aberdeen, during an epidemic, both commencing, and ending together. So often do Remittent Fever, and Dysentery,

yet no one Suppposed them to be identical. On the other hand, he adduced, that the local Symptoms, and the appearances after death, are the same, allowance being made, for the different situations, and texture of the parts attacked," and this I believe post mortem appearances have proved. "Both complaints are characterized, by the great disposition there is, to the deposition of pus, in various parts of the body". Which we also know to be true. But the strongest argument, seems to be in the fact, that the two diseases, may during life, mutually produce each other, and the author brings forward many undoubted cases, in support of this opinion. As the similarity, which he does not mention is, that both diseases, have a tendency to pass into gangrene, instead of Suppuration, as evidenced by the Observations of Taylor mentioned above.

If, in the preceding pages, the conclusions I have drawn from the facts observed by myself, and those recorded by others, have not been, very generally erroneous, I trust, they have at the least, afforded useful instruction to myself; if this is the case, even should they possess no other merit, I shall be satisfied.

Balt. Alms House. Chas. Frick

An Inaugural Dissertation,

on

Pneumonia, Typhoides

Submitted to the examination

of the Provost, Regents, and

Faculty of Physic

of the

University of Maryland,

for the degree of

Doctor of Medicine,

by

John F. Moran

of

Baltimore Maryland

Session of 1844-45

To Elisha Bartlett, M. D.

In dedicating

to you the following sheets, as an Inaugural Dissertation, on Pneumonia, Typhoides, allow me to assure you, there is no individual as endowed with extensive and correct professional acquirements, who would sooner have occurred to me than yourself -

Allow me Sir, to acknowledge in this my first attempt, my obligations to you for your continued evidences of friendship, and to thank you for the — encouragement the sound and profitable doctrines you have inculcated, have engendered in cheering me on, during my Scholastic career within the walls of the University of Maryland

I am Dear Sir,

With much regard Your

Obt Servant & pupil

Jno. I. Moran

In considering the disease known by the 1.
appellation of Pneumonia, it will be necessary
to distinguish it from other forms of Pulmonary
disease, which in their ordinary acceptation —
have, a considerable latitude of meaning; I shall
not attempt, a distinction between Pneumonia
and Pleurisy, as I believe such distinction,
would be impractiable, were it even possible,
it could serve no practiable perpose. I Con-
sider the lungs and Pleura are for the
most part simultaneously involved in inf-
lamation, and so far as I am acquainted —
with the disease, no variation of practice would
be warranted, though it were ascertained
to be seated exclusively in either organ;
indeed, in the language of ancient and
many modern Pathologist, inflamations,
both of the lungs, and pleura, have been

comprised, under the common denomination of Pleurisy; in conformity with this usage, I shall in the course of the following observations, use the words Pneumonia, and Pleurisy, as synonymous, and convertable terms. It is however necessary to establish between the forms of Pneumonia a diagnosis as accurate as the nature of things will allow. although, such diagnosis may be rendered apparently clear, by the description of well marked cases of its various forms, yet those forms as might have been expected a priori are indefinitely diversified, and pass into each other by imperceptible gradation, the division of Pleurisies, now sanctioned by the general language of medical men, is that which arranges them as inflammatory, Bilious, and Typhoid; I think these may however be variously complicated. thus, a Bilious pleurisy, may be highly

inflammatory, or it may be Typhoid. as these distinctions are in some degree founded in nature, and are absolutely necessary for the direction of practice, I shall proceed to trace them out as well as I am able. Pleurisy — purely inflammatory, are in general distinguished by the absence of Gastric, or Nervous symptoms, but chiefly, and most uniformly, by the strength and hardness of the pulse, and by its tendancy to rise and recover its force after having been reduced by depletion; In Bilious Pleurisies attended by considerable Gastric disorder, the reduction of the pulse affected by a single blood letting, generally removes the cause of the disease, and the force of the circulation is rarely so much increased, as to require its repetition. In — inflammatory Pleurisies, on the other hand, the morbid excitement of the arterial —

system, is reproduced, from day, to day, requiring the frequently repeated abstraction of blood. In such cases large and repeated bloodletting is indispensable, to save the lung from disorganization; it is unnecessary to say more of a form of Pneumonia, introduced here merely for the purpose of illustration. Typhoid Pneumonia, is only a grade of the Bilious form, and differs from it, as a part, differs from the whole in which it is included; I believe the Profession will sustain me in declareing, that all, Typhoid Pleurisies are of the bilious form, and that their prevalence is generally attended by various other grades of pulmonary disease, all marked, by the bilious diathesis - I believe it to be the universal opinion, that a preexisting — bilious diathesis, is indispensable, to the occurrence of the Typhoid state. It may be - - -

observed however, that this diathesis, is by no-
means inconsistant with an excitement of an in-
flammatory character, for in cases where the abdomi-
nal, viscera, have been previously disposed by the impr
ression of marsh effluvia, an inflammatory ten-
dency seems to be impressed on the succeeding pul-
monary disease, thus, the winter Pleurisies of low
and marshy countries, are according to the observation
of eminent men in the profession, less liable to assu-
me the Typhoid type, while high, and salubrious
regions, have constituted the principal causes of-
Typhoid affections of the lungs; with regard to the
prevalence of Typhoid Pneumonia in high situations,
this disease bears an analogy, to dysentery and
Typhus fever, they all seem in general to result
from a miasmatic impression, too slight to be
developed in immediate fever in its regular
form - Bilious Pleurises very rarely occurs

In infancy, and of the Typhoid form, it rarely, if ever occurs under the age of six, or eight, years, and our late and lamented, Professor Potter of this University, has said that he never saw this disease fully developed in the African – but this is doubtful, according to statistics of Typhoid fever in 1814–15 which was fatal to great numbers of this class of people, It may be laid down as generally true, that Pneumonia Biliosa, has a much stronger tendency to the Typhoid type, when it prevails as an Epidemic – An Epidemic Pleurisy of inflammatory type is certainly a very rare occurence, especially in high Countries. Cases of Bilious Pneumonia in which the disease appears to be chiefly local, the Constitutional affection being but imperfectly developed, rarely if ever assumes the Typhoid type, as a distinction, they are perhaps never, ushered in by a distinct chill. The Gastric Symptoms, are less prominent, and Constitutional

disturbances much less, the patient being rarely confined to bed, the pulse, is less rapid, but more resisting, and at the same time less vibratory, In fine this form seems to be chiefly local, but is attended by slight gastric disorder, and is of frequent occurrence, but never epidemic, It generally yields to one bleeding, and the use of the antiphlogistic regimen, with laxatives, and demulcients, for a few succeeding days, its duration is wholly intermediate though commonly limited, under judicious management to a few days, the local disease, however is liable if neglected to become serious, and protracted- having remarked briefly upon the pathology, of this disease; I shall in the next place, notice the symptoms, commonly, but by no means universally - The invasion of Pneumonia Bilosa of what ever grade, is marked by a distinct chill, this is sometimes substituted by slight sensations of chilliness, frequently of - -

considerable duration, and occasionally, extends to several days. Premonitory symptoms precede the attack, similar to those which precede the occurrence of other febrile diseases, but generally accompanied also by catarrhal affections. It happens not unfrequently that the severest forms of Bilious Pleurisy supervene on catarrh, by the aggravation of the catarrhal symptoms, every practitioner should regard a severe catarrh as the possible beginning of Pneumonia, nor are there any diagnostic symptoms by which the transition of the former into the latter can be distinctly ascertained, if, as Dr. Tully maintains, catarrh be confined to the mucous membranes, while Pneumonia involves the parenchyma of the lungs, it is plain that in passing from the former into the latter the disease in augmenting its violence and extending its seat, only changes its name, without the slightest change in the nature of morbid action, whenever Pneumonia commences without chill, which it does in a considerable

portion of cases, it in general arises by gradual transition 9"
from catarrh, cough, in the great majority of cases,
is from the beginning a troublesome symptom, but it
occasionally happens, even in the most acute cases,
that there is no cough whatever; sometimes the cough
is almost incessant, greatly aggravating the pain, &
producing extreme distress: The expectoration is at first
scanty, but becomes more copious as the disease advances,
In perhaps about half of the well marked cases, the
sputa are streaked with blood, and not unfrequently
tinged with bile. Thoracic pain, is an universal
symptom, but it occupies various parts of the chest
sometimes it is confined to a single spot, at other
times it is diffused through various parts of the thorax,
the breast and sides are its most common seats, but
it occasionally invades the back, about the region of
the lower ribs, and in how ever it may be seated, very
frequently extends through the breast to the scapula-

Pain of the head attends a certain proportion of cases, 16,11
perhaps not more than one third the whole number,
it seems to be purely sympathetic of the gastric or
pulmonary disorders, seldom continues beyond the
early stages, and presents no distinct indication
in the treatment: The state of respiration may be
regarded as being far more important in the prognosis,
than any of the former symptoms mentioned. It is
impossible, however, for laborious breathing to continue
long without seriously affecting the pulse, The tongue
is perhaps uniformly coated with a yellow fur—
where the typhoid condition supervenes, which frequently
occurs in protracted cases, it becomes first brown and
dry, afterwards black, or of a smooth shining red, and
here a change of these appearances towards the natural
condition, will afford the most decisive sign of convale-
scence. The skin in a great many cases, is relaxed and
moist, from the beginning; it is however often dry and

constricted. In many cases the skin remains dry for several days, and here the other symptoms cannot be controlled perfectly, until perspiration be excited. A free expectoration commonly follows a copious diaphoresis, but seldom takes place while the skin remains constricted; the colour of the skin and eyes, are frequently concurrent signs of the bilious character of the disease, the pulse is generally both quick and frequent, and possesses a jerking or vibratory character. In point of frequency the pulse is various, ranging from the natural standard, to a point above it, to 120 in a minute. its average rate may be about 100. a very rapid pulse is one of the most unfavourable Sympt.s in this, as it is in most other diseases. Treatment first venesection although this remedy is by no means universally required in Bilious pleurisy, the pulse however affords a tolerable safe criterion, but in all the cases of the least doubt venesection—

should be omitted during the prevalence of a Typhus
Pneumonia, In the class of cases mentioned at the
outset, where the local affections exists without the
full developement of the constitutional excitement or
gastric disturbances, the lancet is very frequently
required, though not universally, there is in such
cases no affection of the general system which
can give rise to a typhoid tendency: the use of
the lancet should be followed by mucurial cathartics
or Emetico-Cathartics: and these by laxatives and
demulcents, with a refrigent and antiphlogistic
course, continued for several days. Bleeding should
never be practiced after the pain has materially
abated, and expectoration has become free: In
every critical case where the lancet is used, the
pulse ~~begins~~ should be constantly and cautiously
examined during the flow of blood and should be stopped
as soon as the pulse begins to flag. Secondly

Emetics, this class is said to be of great importance in the treatment of Bilious and Typhoid Pleurisies. They perhaps counteract the morbid action. they unload the Stomach, and produce a salutary effect on the pulmonary circulation, and above all, powerfully assist in promoting perspiration, if followed by suitable Diaphoretics, and external heat by means of warm covering, in the latter stage of this disease, as of all others bearing the slightest asthenic tendencies, Emetics, and especially, antimonial ones should be used with great caution. Whenever venesection is judged proper, Emetics, if used at all should follow that operation. In cases of high excitement we should omit the use of emetics unless there is some very important indication for their employment, Thirty Gentlemen, these remedies are far more universally required in the cure of Pneumonia Typhoides than the Class last mentioned, the degree required in these cases must of course be very various depending on

the extent and continuance of the bilious symptoms, 44
and strength of the patient; in a great many cases
however a single active purgative of Cal? or an Emetic
Cathartic, followed by castor oil, or Salts, and Senna,
will be sufficient. one or two discharges should be
procured daily afterwards, by the use of aperients, when
the strength is declining considerably, Rhubarb is the
most safe and manageable aperient, In such cases
as the debility becomes augmented, the large doses
of Cal? should be omitted, 2 or 3 grs with larger doses
of Rhubarb, say 15 grs, should be given, or when the stren-
-gth is exausted to a still greater degree it is best to
rely upon the Rhei alone, assisting its operation if
necessary by Enemas, The occasional use of Purgatives
in Prem. Typhoides does not at all interfere with Sweat
or expectoration, on the other hand it serves to promote
both these salutary discharges by diminishing the
degree of morbid action, and thus affords a more

favourable opportunity for the exertion of the restorative 15
powers of nature, It may be observed that in cases
of extreme, and dangerous prostration, all evacuations
should be avoided, and our dependance placed solely
on Stimulants, and external irritation, until the powers
of life be in some measure restored. Fourth, Diaphoretics,
these are medicines of high importance in the treat-
ment of Pneumonia Typhoides. They stand next to
those required for the evacuation of the alimentary
canal, and for the purpose of counter-irritation, they
should be accompanied by plentiful warm dilution,
without which they would probably poses but little efficacy
In high grades of action, Antimonials, alone, or in com-
bination with Prot Chlo. Hyd. & Nitrate of Potash, form
the best diaphoretics. The Dovers pulv. though a useful
diaphoretic where its anodyne action also is desired,
would be inadmissible, for this purpose in any form
of Pneumonia, as the Opium would tend to obstruct

Expectoration, and other salutary processes. Some change of the diaphoc. remedies is generally required, for Inst. if Antid. and Nitrate of Potash, were used at the commencement, it might afterwards become necessary to substitute — for them in succession the acet. of ammonia the Spt. Nit. dulc. and sometimes towards the close, even — Serpentaria, Camphora, and ammonia. but the only rule by which these changes can be made and regulated is this, that the diapho. medicines used at any period of the disease, must be accommodated to the existing state of excitement, it not unfrequently happens that an excited state of the system, attended by hot skin, and an irritable pulse, occurs in the decline of this disease even of the Typhoid type, in such cases it would be better to refrain from all medecine — except occasional doses of Rhee. &c, for the regulation of the bowels with a due attention to this object and a light and careful diet. the irritation will commonly

wear away in the course of a few days. In the State of debility, which often occurs towards the close, a cold infusion of Serpentaria, or of this combined with Quassia, will have a salutary effect. in low States of the system wine whey Camphor. Ammonia &c. is strongly indicated besides the stimulating diapho. other stimulants may be required, such as are resorted too in Typhus fever, for Inst. wine, Brandy, Serpentaria, Camph. Am^{a} &c. Sixth, Blisters these may be regarded as remedies of primary and essential importance in every form and grade of acute pulmonary inflamation, though there should be certain limitations to there use. Sixth Mercury, this medicine is employed in this disease as a Cathartic, aperient and alterative, it may however become occasionally necessary in Miasmatic Situations. particularly where hepatic affections may be a prominent Symptom, In ordinary cases an attempt to produce Ptyalism, is much worse than useless in what ever stage it may

be made. It is a notion not uncommon among Prac. 18..
titioners, that in those critical conditions, arising in
the latter stages of disease, the activity of treatment
should be in proportion to the danger, and that all
the resources of the art should be put in requisition,
the very reverse is generally true - in such states
of disease, caution is a quality still more important
than energy, and recovery will much oftner be accom-
plished by a careful preservation of the powers of
life than by any active practice. In situations,
where debility is almost one of the chief sources of
danger that practitioner is most ~~active~~ successful
who in fulfilling the obvious indications, is most
cautious, in exausting the vital powers, for Mercury
when used in low Typhoid states of the system
has this exausting tendency.

To Conclude, the extent and importance
of the above subject, most unquestionably, affords a

field for more extensive remark, but it would ill become me at this period of my medical career, to indulge in a spirit of Pathological generalization, or of Therapeutic, Speculation, I am satisfied to have advanced certain leading facts, which if properly investigated, and carefully carried into the Chamber of the sick, may elicit other facts, and thus afford an opportunity of extending our knowledge in reference to the Pathology of the disease and the utility of the Therapeutic plan we have proposed.

An Inaugural Dissertation,
on
Injuries of the head,
Submitted to the examination
of the Prevost, Regents, &c.
Faculty of Physic,
of the
University of Maryland,
by
William Ragan,
of
Hagers-Town Maryland,
February 1st — 1845 —

W. R —

The
following synopsis of the opinions
of eminent Surgeons
on
injuries of the head, and the most approved treatment
thereof,
is inscribed to Samuel Chew M.D.
professor of
Therapeutics, Materia Medica, and Hygiene,
in the Medical University of Maryland,
as
a small tribute of respect for his professional
knowledge and kind attentions to his pupil

Wm Ragan
M.D.

Injuries of the Head

Injuries of the cranium have been arranged by surgeons into more or less classes, each class having some peculiarity of its own to distinguish it from the rest. Whilst I hope to show that I have been careful in adopting thoroughly tested opinions on this, to me important and interesting portion of surgery, I trust I shall be found equally careful in rejecting such as have nothing to sustain them but theory.

In order to distinguish the different degrees of injury inflicted upon the cranium, the extent of consequent danger, and the appropriate treatment of each, the following arrangement has been adopted— namely: Fissures, counter fissures, stellated, depressed or camerated, and punctured fractures.

The difference of injuries received by the skull is owing to the means by which it is produced, and the power that produces it, as well as the inequality and relative thickness and strength of the bones of which it consists— Viz: The os frontis, two ossa temporalia, two ossa parietalia, os occipitis, os sphenoides, and os ethmoideum—

A fissure is a simple crack or division of one or more bones of the skull.

A counter fissure is a fracture which happens upon a portion of the skull opposite to that on which the violence occurs, or upon some point distant from it. For instance a blow inflicted on the sagital suture, the temporal angle of the parietal is broken or started from the dura mater beneath. The reason why this description of fracture does not more frequently happen, is that the vibration produced by the blow, in making the circuit of the skull, meets with thinner and weaker lateral portions of bone, which yielding to its influence, is fractured in place of that directly opposite to the part of the skull upon which the blow was received.

Mr. Cooper says, counter fractures are never depressed, nor attended with splinters and fragments of bone. These can only happen when the head is struck by a broad, flat body, in which case, the force tending to produce the breach of continuity is transmitted to all the bones of the skull, and if the part that is directly struck can make resistance equal to it,

which another part can only make one equal to 5, the latter is broken and not the former, but as the weapons and bodies with which blows are mostly given, have angles and prominances, we see the reason why the cranium is generally fractured immeadiatly where the violence is relieved". When the force of a blow has not prejed a portion of bone in upon the brain, or when the dura mater is not irritated by the rough edges of it, fractures, in themselves, are considerd of little consequence. But is it not reasonable to conclude that a stroke powerful enough to crack the cranium may be sufficient to shock the brain, so as to produce extravasation to some extent, and inflamation of it or its membraines. To guard against such consequences, is it not safe to resort immediatly to Antiphlogistics and continue them some time, particularly as no peculiar symtoms succeed to fractures of this kind and their is no safe way of discovering their extent but by the eye or touch. If their is no mischief done by the blow, within the walls of the cranium, this treatment may prevent or subdue inflamation of the

wounded integuments of the skull, and obviate the danger that otherwise might happen, from their vascular connection with the parts within; and if the shock has reached the brain, may if proportioned to the exegency of the case, save the life of the patient.

A stellated fracture is when there are rays running from a single centre, making a fracture in the form of a star.

A depressed or camerated fracture is when a person falls from some eminence and lights directly on his head upon some solid body, or when some heavy substance is precipitated from a height and falls upon it, producing a fracture in extent long and wide, the centre of which is depressed in a direct line, the sides declining towards that centre.

A punctured fracture is represented to be that form of wound in the bone, which has the same relation to wide fractures and broad depressions that the stab of a bayonet has to the cut of a sabre.

Treatment of Fractures

It is said that cases of fractures, both simple and depressed, when judiciously and carefully committed to nature have done well without receiving any surgical assistance, and that in fractures of the cranium the trephine ought not to be resorted to unless the symtoms are dangerous and some of the membrains or the brain itself injured, so as to indicate its use, which is entirely to be left to the decision and skill of the surgeon.

Sir Jn° Bell says wherever I have found the surgeon impatient to perforate, intent on raising every depressed part of the skull, careful to include in the circle of his saw every suspected piece of bone, and anxious to secure a free evacuation of matter by large openings, I have seen such tearing up of the skull, especially in boys, as I could not witness without pain, uniformly followed by protusion of the brain and death." Thus condemning all hasty operations, as well as the making of large openings for the discharge of extravasated blood, and thereby, exposing the brain to the air, dressings &c, as reprehensible and dangerous in the extreme.

If there is a fracture upon the base of the skull,

or a fisjure extends itself to that part, through the cuneiform proces of the occipital bone and foramen magnum it generally proves fatal, unles counteracted by the strength of the patient and his healthy constitution. If the symtoms indicate injury of the brain from the fracture, the skull has received, or irritation be produced by splinted fragments of bone, these must be carefully removed by the forceps, or fingers, and the lips of the wound brought in contact with each other to procure adhesion, and if necessary, a stitch added, carefully guarding against drawing it too tight, lest inflamation be produced. In bringing the lips of the wound together an entire adhesion must be strictly guarded against, by leaving a small vent and keeping it open by means of lint, so that any matter collecting between the integuments may pass out to prevent inflamation and the bone becoming carious, which would make the use of the Trephine indispensible. To guard against inflamation, or to subdue it should it come on, the patient must be kept upon low

diet, venisection from the arm or if the case requir-
-e it, from the temporal artery, cold applications
to the head, sinapisms to the lower extremities,
injections, mercurial purges with antimonials if
the patient is able to swallow, must be resor-
-ted to, according to the exegences of the case-

Compression of the brain from extravasation

Extravasation of blood upon the brain is the result of
some vessel being ruptured within the cranium by a blow
or violence of some kind inflicted upon the head, and the
blood is often effused upon the brain or between the ventric-
-les, as well as between the dura and pia mater, when there
is no fracture of the skull- If extravasation happens
between the convolutions of the brain, it is said to be
diffused, if between the ventricles to be circumscribed-
Extravasations that take place between the dura ma-
-ter and base of the cranium are considered the most dangerous,
and the least pressure is said to be produced when the blood
is effused between the tunica arachnoides and the dura mater
unless the quantity be great-

Whether the brain be compressed by a portion of bone, an extravasation of blood, an effusion of mater, a ball, or any other foreign substance lodged between the dura mater and the skull, the symtoms are said to be the same.

If concussion and extravasation exist at the same time and the patient remains insensible without any lucid interval, danger may be apprehended, although it is difficult to determine whether the continued insensibility is produced by the concussion or the effusion of blood.

As it would be impossible minutely to detail all the symtoms peculiar to each grade of compression of the brain from extravasion in an essay of this kind, I hope to be excused for substituting the following gradation of Sir C. Bell. He remarkes, that "Stupor, though deep, and to the Eye seemingly very dangerous, is not cause for immediate alarm to the experianced surgeon: Delerium succeeding such stupor shows that the vascular action is begun, and the oppression at an end.

Slighter somnolency free from stupor, in which the patient has his senses (though inclined to sleep) but with a heavy oppressed and intermitting pulse, is extremely alarming and requires the Trepan: Stupor, accompanied with dilated pupil, and palsy on one side indicates the most imminent

danger, yet such is often relieved by the Trepan. Stupor in which the face is pale, the extremities cold, the pulse not heavy and labouring, but quick and fluttering, especially if attended with palsy of one side, or slight convulsions, agitating the features or the limbs, is a state altogether to be dispaired of, yet perhaps it is even here our duty to operate, but without hope".

The following case occured in my neighbourhood. Leonard E, a young man about 18 years of age received the kick of a horse on the forehead and was knocked down, but in a few moments got up, caught the horse and put him in the stable, and then walked two hundred yards to the house. He had slight stupor and complained of pain in the head. A Physician was called in who after examination pronounced the injury to be, concussion without fracture, and dressed the wound with adhesive straps &c. and continued to visit the patient ten days, the stupor increasing daily with stertorous breathing. On the tenth day Dr Wm D Macgill was called in and immediatly pronounced the injury an extensive fracture and proceeded to operate. He removed all the anterior portion of the frontal bone, extending up to the coronal suture, a portion

of the orbital ridges with the nasal bones. In all, he removed twenty seven pieces of bone. After the operation his pulse and breathing became more natural, and he continued to improve for several days. On the night of the fourth day from Dr W's first visit, his breathing became more stertorous and his heart laboured much, so that his friends supposed him dying. The Dr removed the dressings and on probing the wound discoverd a hard substance imbedded in the right hemisphere of the brain, he forthwith enlarged the opening and removed a spicula of bone that had been forced in by the kick of the horse. Some pus was discharged and his pulse and breathing became better. At the [illegible] from which the spicula had been removed a hernia cerebi formed, but was removed by continuing a compress of sponge with a bandage. Pus accumulated from time to time in the sinuse that had formed by the last removed spicula, producing unfavourable symtoms, but enlarging the wound invariably gave relief. During the time the patient was confined (about ninety days) his discharges by stool and urine were involuntary. By the above treatment, occasional bleeding and strict attention to low diet the patient recovered. The shock his system received from this dangerous

injury, did not in the least impair his mental faculties.

Treatment of compression.

If the symtoms are such as indicate effusion of blood upon the brain, the lancet must be resorted to, and its use repeated as often as the state of the pulse demands it, always being cautious, when one side is palsied, not to draw much blood, as in such case, "the brain being already compressed, and the vital powers low", there is danger of suden-ly prostrating the strength of the patient. Purgatives must also be administerd as circumstances require, and a low diet strictly adhered to. In a word an antiphlogistic treatment must be persevered in, proportioned to the urgency of the case. If with such treatment, the symtoms do not abate, or if they become more alarming, the Trepan must be used to relieve the brain from the pressure of blood.

Concussion of the brain.

Of every description of injury of the head, with the exception of punctured wounds, concussion of the bra-in appears to be the most dangerous. It may be produca-d in a variety of ways, such as by being thrown from a

horse, falling from a height, being accidently knocked down and the head coming in contact with a stone or the pavement, or by the falling of the limb of a tree or other hard substance upon it &c.

Although the symtoms that follow compression and concussion are so similar and are generally so combined or intermixed as to embarass the most experienced surgeon, yet it is said that the symtoms of the former will distinguish it from the latter. Dr Abernethy says pressure on the brain occasions insensibility partialy or generally, and that the pupil of the eye is dilated and can not be made to contract even by a strong light. The respiration is slow and stertorous, and the pulse proportionately slow and labouring. There is no vomiting, which would indeed indicate sensibility of the stomach. The limbs are relaxed as in a person just dead, on the pressure being removed, sensation and intelligence are immediatly restored. In concussion, the insensible state is of short duration, and during its continuance the body is generally cold, and the pulse feeble and intermitting. Afterward the skin is hotter than usual and respiration more frequent; the former often

intermits, and the latter has not the stertor of apoplexy: The pupil of the eye is not dilated but rather contracted. The countenance expresses pain or uneasiness, and vomiting occasionally take place. The state of the patient is like that of a heavy and uncomfortable sleep; yet being roused, signs, even of intelligence appear" But as concussion happens in very different degrees, even "from the light stunning of an inconsiderable blow, to the complete disorganization which annihilates at once the power of motion and every spark of life," it would be a serious task to enumerate the variety of symtoms that accompany the different grades of injury that follow a concussion of the brain.

Stupor decreases in the same ratio that sickness, increased pulsation, respiration and other symtoms indicating inflamation of the brain come on, unless the injury be of such extent as effectually to preclude the return of any sign of sensation.

Delirium after stupor is a favourable sign, and shows that the vascular action is begun and the oppression at an end unless accompanied with dilated pupil and paralysis of the side - these indicate

imminent danger. When the injury recieved merely produces a stunning follo-
-wed by quickness of the pulse, some pain in the head, dizziness and
sickness at the stomach, it may be relieved by carthatics, yet even in suc-
-h a case, the patient should be carefully attended to, as dangerous
consequences sometimes happen, when least expected. A small injury
received on the head may produce inflamation of the membranes.

If inflamation come on during the insensibility of concussion,
it is marked by increased pulse; flushing of the face; restles-
-ness; the warmth more diffused; he feels when pinched, but still
is stupid and should be diligently watched. If he survives and
becomes sensible he resembles an intoxicated person. Some-
-times he has a morose expression: the countenance and
eye inflamed; contracted pupils; rapid pulse; convuls-
-ions and cord like tension around the temples."

In such a case, means proportioned to the urgency of the
symtoms, should be resorted to, to subdue the [illegible]
of the brain.

The following case was treated by Dr Macgill and
came under my observation in the winter of forty-four:

A limb having broken off a tree that a wood-chop-
-per was falling, in its descent, struck him upon the right
parietal bone between the temporal ridge and sagital

suture, slightly dividing the integuments and prostrating and rendering him insensible. A sheet having been procured, he was carried home in it, and a Physician sent for. The Doctor reached the place in about two hours after the accident occured. and having made a crucial incision through the integuments found there was no fracture. The patient still continued in a state of stupor and a cup of coffee was given him, but owing to sympathy between it and the stomach, it was thrown up. As soon as a reaction took place he was bled and a purgative administered, but with the same result as with the coffee. After which injections were ordered and cold applications to the head. The patient remaind restless through the night but still stupid.

The next day he was more rational but totally unconscious of what had happend the day before, supposing he had been injured by the kick of a horse. As the stupor lessened, he complained more of the pain in his head. Bleeding was repeated, cold applications continued, his bowels kept open and a low diet persevered in, and in 8 or 10 days he was entirely relieved.

Treatment of concussion.

Bleeding after reaction has taken place, a continuance of which must depend upon the extent of the injury, the violence

of the symtoms and the constitution of the patient_ Purgatives with low diet_ Cold applications to the head_ after benifit from these, blisters will be found advantageous_ An elevated position of the head during the whole healment, is said to contribute towards the prevention and removal of inflam_atory action_

Cases requiring the use of the Trephine &c_

The object the surgeon has in view in applying the Trephine, is either to make an opening for the discharge of extr_avasated blood, or matter, or for the introduction of the elevator, when there is not space to pass it between the fragments of bone, so as to restore the depressed portion to its natural position, as well as to make way for removin_g the spiculæ that may have been driven in by the fo_rce of the blow that caused the fracture, always keeping in mind that the symtoms call for the oper_ation, and not the mere fracture_

The symtoms that indicate extravasation of blood, are "oppression, somnolency, a heavy pausing pulse, a dila_ted pupil and palsy of one side" When the patient has stupor, face pale and extremities cold, quick and

fluttering pulse, with palsy on one side, or slight convulsions the case is said to be hopeless, but that it is still the duty of the surgeon to Trephine—

If there be evident symptoms of pressure upon the brain, it is necessary to operate, wether the skull be fractured or not, and if the skull be fractured and no dangerous symptoms follow, an operation is not considerd requisite, but cases of this discription require great experiance and a discriminatin-g judgement in the surgeon to determine what course to adopt, as fractures sometimes happen without any evidence of being serious at the time, which have eventually termina-ted in inflamation of the brain or its membrains, and might have been prevented by a timely operation— As the pericranium will seperate from the bone and the exte-rnal table of the skull perish when matter has collect-ed on the diploe, a portion of the external table must be removed, so as to discharge it, or fatal consequen-ces will be the result— It has been said by high authority "that all punctured wounds should be trepa-ned" The reasons given for this rule, are, the impos-sibility of ascertaining to what depth the instrument inflicting the wound may have punctured the brain;

in what degree or form the bone, especially the inner table may be pactured, that blood is often exchavasated, and spicu-le often found sticking in the dura mater, or in the sinuses, and that caries is, in this form of fracture almost inevitable. The direction for operating in such a case is to place the centre-pin of the instrument as near the centre of the pacture as its irregularities will allow in order to save the sound bone. I give the following case, that came under the care of my preceptor D^r M, not so much as an exception to the above rule, as to show to what extent the brain may be injured without effecting the rationality of the mind.

A little girl in approaching the place where markomen were shooting at a target, received a rifle ball about an inch above the right superciliary ridge, she was not knocked down, nor did she complain of pain, and was able to sit up until the sixth day, being perfectly rational up to that time. On the sixth day the fever came on, and she died on the seventh. On dissection, the ball was found to have paped diagonally about two inches through the right hemisphere of the brain, and thence into the left hemisphere, stoping within an inch of the meatus auditorius

internus. With a full knowledge of all the circumstances attending this hopeless case, would it not have been an act of useless cruelty to have tortured the girl with an operation?

When the os frontis is fractured, so as to call for an operation, great caution must be used because of the inequalities of its inner table. Owing to the prominence of the spine of the os frontis a full circle can not be cut out without wounding the dura mater with the teeth of the saw, as the inner table will be divided before the projecting spine is cut through; nor can you safely apply the trephine nearer to the superciliary ridge than within half an inch of it without risk of injuring the orbit. The practice in such a case, is to employ two trephines, a large one for the outer portion of the bone, and a smaller one for the inner, as a single trephine cannot be made to work perpendicularly against the inner table, because of the unequal form of the sinus. In applying the trephine to the os occipitis when fractured care must be observed because of its unevenness lest the longitudinal and lateral sinuses be wounded. To obviate this danger, there are two small spaces on each side of the groove for the longitudinal sinus, where the trepan may be safely applied.

If there be fracture between the transverse ridge and foramen magnum and pressure upon the cerebellum, the muscle may be divided and an operation performed for the removal of the pressure, otherwise it will be fatal- Whilst the pericranium is found to be undetached from the course of a suture, it is always found loose and detached from that of a fracture; Besides this mode of discriminating between a suture and a fracture, the edges of the bone in the latter always seems rough to the probe or finger-

If with a fracture the scalp is wounded you can enlarge it or change its form so as to apply the trephine to most advantage-

If the integuments remain entire, make an incision in the form of the letter D and raise the rounded portion from the bone, which being turned back will serve, after fixed the centre pin upon the bone, as a guide for the saw untill the circle is cut deep enough to retain it there, when to prevent injury to the dura mater the pin must be withdrawn- Remove and brush the saw from time to time to free the teeth from dust and examine often and carefully with the probe wether you are nearly through, lest inadvertently you cut into the dura mater or brain-

Should a portion of the bone be seperated whilst another portion remains undevided the saw must be discontinued, and the undevided portion detached with the forceps and the projecting edges of the bone smoothed with the lenticular to prevent irritation of the rising dura mater. The circular portion of bone must be prized up by employing two levers, one on each side; for if you use but one you raise up one side of the bone, whilst you depress the other.

If the pressure from the surface of the bone is not removed by one perforation, the operation must be repeated untill it is, or the desired object will not be obtained. If any large arteries are divided during the operation that cannot be compressed, they may be taken up by the tenaculum or needle.

Should the dura mater be forced into the opening by effused blood between it and the brain, the membrain may be cautiously opened and the blood evacuated. It is said that the "operation does not generally succeed when this is necessary, but that it is the only chance the patient has."

In dressing the wound the integuments should be

laid down, if it can be done, and the compress and roller lightly applied, so as to prevent the dura mater from keeping against the edges of the bone, the result of which would be ulceration and then fungus.
Appropriate means to prevent or subdue inflamation of the brain must be carefully and judiciously attended to, always recollecting to have the patient placed with his head raised high, and kept quiet and free from all exciting causes.

Fungus, or Hernia Cerebri.
Authors describe several varieties of Hernia Cerebri, one of which occurs in infants before complete ossification of the cranium, and is soft and round with a pulsation similar to that of the arteries, and coverd by the integuments — gentle pressure on the tumour is the remedy.
Another species of encephalocele is the consequence of congenital deficiency of a portion of the cranium and scalp, which may be regarded as a malformation. The infant in this case is still born, or survives but a short time.
The fungus that follows after the destruction of a part of the skull by desease, or the operation of Trephining is of

much more frequent occurrence than either of the foregoing kinds
This tumour generally rises a few days after an operation, making
its way through the dura mater and extending through the
opening of the skull. The symtoms produced by this protrusion
are similar to those of compression of the brain, and always
considerd dangerous.

Mr Abernethy's opinion appears to be, that two kinds of protrusions
succeed to exposure and irritation of the brain - the one
formed of coagulum - the other a vascular fungus, and that
the former may be distinguished from the latter by the
rapidity of its growth. Other eminent surgeons, after hav-
ing cut a portion of the fungus off, have found it to consist
both of the cortical and medullary substance of the brai
n and the exterior to be a layer of coagulated blood.
Whatever the consistency of the tumour may be, reason seems to
indicate the necessity of repressing its increase by external gen-
tle pressure so as to give that support to the brain which
it had hitherto received from the dura mater and bone.
Light dressing, gentle pressure, "a removal of the protruding
mass with the scalpel" when it is so great as to endanger
the life of the patient, and bleeding to prevent or
subdue inflamation of the brain seem to be the most

approved treatment of Hernia cerebri.

The compress must be placed upon the tumour and retained there by adhesive plaster, or other means, until it is brought down upon a level with the bone and the integuments heal over.

Cases of this desease have been known to get well without any treatment, from the fungus being strangulated by the rapid increase of the surrounding granulations, or by pressure of the bone.

An

Inaugural Dissertation

on

Rubeola

Submitted to the Examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

Session of 1844 & 45

by

Herman Wigman

of

Baltimore

Morbilli Rubeola Measles

General Observations. The terms morbilli and rubeola are used as mere synonymia by the American, English and French practitioners, but the German writers generally employ them to designate two distinct diseases — appropriating the former term to the present affection, and the latter to a different though somewhat similar complaint (roethlen) described by Willan under the name of roseola

The contagiousness of measles has by some been denied; Among other circumstances it has been stated that the disease can never be traced from house to house, or from street to street, as may frequently be done in small pox or scarlatina; and that its appearance is generally simultaneous in several individuals, — both of which facts are opposed to the notion of its being

propagated by contagion. But this with every other argument of the kind is fully met by the well established truth, that the malady may be communicated by inoculation Dr Home succeeded in verifying the fact in a number of instances; and more recent experience has fully established the fact of morbillious inoculation.

The contagion of measles does not seem to be so active or powerful as that of small pox. During the greatest prevalence of the disease, many individuals entirely escape infection although exposed to its full influence; and it is by no means infrequent to find in the same family a few affected and the rest totally unaffected by the malady. It is difficult to say at what period of its progress measles become infectious. Many believe it incapable of communicating

itself until the period of the eruption, but it would seem, from a few well attested cases on record, that the disease may acquire an infectious power a day or two before this event.

Measles, like small pox, rarely affect the same individual twice; and indeed a second attack of the former, would seem less frequent than of the latter complaint. After a careful observation of more than twenty years, Willan declares that he never met with a second attack of febrile rubeola. Home mentions a singular instance, in which enlargement of some of the lymphatic glands followed an attack of measles. About six months having elapsed, the glandular swelling subsided, and the patient became a second time affected with the measles.

Measles rarely occur sporadically; but when

they appear as before mentioned many individuals usually become affected with them at the same time. As in all other epidemic diseases, the general course and phenomena of this complaint are often strikingly modified; and systematic writers have therefore, divided it into several varieties, according to the regularity or irregularity of its symptoms, the nature of the attending fever and the character and violence of the local affections with which it may be complicated.

According to the observations of some, mor. billious fever occurs without any exanthematous affection. It certainly is not uncommon during the prevalence of epidemic measles to meet with fevers, attended by the usual catarrhal symptoms of the disease, but unmarked by its peculiar eruptions. Richter observes

that persons affected by these fevers, are generaly exempt from the disease during the subsequent progress of the epidemic.

Sometimes the measly exanthem takes place without any fever The German writers Vogel & Stamack describe this modification of the disease under the name of false measles corresponding to the rubeola sine catarrho of Willan and the rubeola sine febre of others It is characterized by a regular measly rash, without fever, catarrh or ophthalmia. It does not take away the susceptibility of the system to a subsequent invasion of the febrile rubeola. An interval of many months even two years has been observed between this variety and the febrile rubeola; but the latter frequently takes place three or four days after the non febrile eruption (Bateman)

Peculiar atmospheric constitution ex

exts considerable influence over this
disease; for at one period it will be so
light as scarcely to require any medical
attention; at another it will assume a
highly aggravated form; in a third period
it may take place ~~from~~ under every grade
of violence, from the lightest to the most
malignant and in a fourth it will hold a
middle course between the mildest and the
most dangerous forms of the malady. (Armstrong)
On the whole the regular and moderate
attacks are infinitely more frequent than
the violent and malignant ones.

Measles appear likewise to be influenced
decidedly by constitutional habit or idio-
syncrasy. Hence it is that we sometimes
meet with the disease under all its grades
of intensity in children of the same family.
In general measles are apt to be more regular

and mild during the warm and equable than the cold and variable seasons.

The time intervening between the first impression of the rubeolous contagion and the actual commencement of the resulting disease varies from a few days to two and even three weeks; but the period of incubation, generally, is from five to seven days. In nearly all the cases inoculated by Home the disease commenced about the seventh day from the insertion of the virus.

Symptoms of the Eruptive Fever The initial symptoms of this complaint do not differ from those, which usually mark the invasion of catarrhal fever. Transient flushes of heat, alternating with faint creeping chills; slight redness and tenderness of the eyes, with an increased secretion of tears;

Cough and sneezing, with a watery discharge from the nostrils, are generally among the first symptoms of morbillious fever. The cough in the beginning is dry and harsh attended by some degree of soreness in the fauces. The stomach is apt to become quite irritable on or about the third day, occasioning considerable nausea and vomiting, and where the febrile symptoms are aggravated, slight delirium may occur in the evening of the same day. The fever is generally a marked synocha, as indicated by the state of the skin and pulse. The exantheme generally makes its appearance between the third and fifth days. This event, in cases of violent nature is sometimes preceded for a few hours, by more or less coma; and in small children convulsions are by no means uncommon at this period. The eruption comes

out first on the forehead, chin, nose and cheeks, and then on the neck, breast body and extremities successively. It consists of small, red spots, apparently papular and resembling fleabites. They soon enlarge, and, as their number increases run into each other, forming larger patches of an irregular or semilunar shape; whilst the skin in the intermediate spaces retains its natural colour. Some of the measles exhibit a small vesicle in the centre on the first day. The eruption is not confined to the surface of the body; red patches appear on the gums extend to the tonsils & uvula and according to Frank are visible on the tongue. The eruption fades away in the same progressive manner in which it came out; so that by the eighth day from the commencement of the fever, it begins to

to disappear from the back of the hands, where it is wont to remain longest. On the succeeding day the exanthema acquires a faint yellowish hue. Desquamation now commences on the face and is completed over the whole body by the tenth or eleventh day.

During the subsidence of the eruption, the supervention of more or less diarrhoea is by no means infrequent; and when not violent it almost always meliorates the general and local symptoms. Occasionally a copious diarrhoea comes on just before the appearance of the rash. As it tends to interfere with the regular course of the exanthema, and to occasion a retrocession, it should be regarded as an unfavorable occurrence.

The aspect, under which this disease

has just been described is that which is generally assumes. It appears however, occasionally under various striking modifications. Sometimes it is unattended by any serious complications in a majority of instances it manifests a considerable tendency to inflamation particularly of the eyes and respiratory organs, and occasionally reaction is sluggish and difficult. Hence accordeing to Dr Armstrong we have three varieties of the disease the simple inflamatory and congestive. To these we may add the typhous and gastric modifications.

Synochal fever of a high grade is the characteristic of inflamatory measles The pulse is hard, vigorous and accelerated, the skin dry and very hot, cephalalgia is

severe, attended frequently with delirium through the night; the eyes are very red, the cough is harsh, violent & distressing, with little or no expectoration, and the respiration oppressed & frequently painful. The exanthem for the most part appears early, & is usually of a vivid red. The diseases, that are particularly apt to supervene in this variety, are cynanche trachealis, pleuritis, peripneumonia, with bloody expectoration, bronchitis, cerebral inflamation and gastro-enteritis.

The malady in the congestive form is indicated by the ordinary forms of internal congestion. Reaction is tardy & imperfect sometimes wholly deficient. The eruption does not appear at all, or it comes out slowly on some parts of the body. If reaction be not induced, coma or stupor ~~of~~ in some

instances convulsions ensue. Young children & persons of a relaxed, delicate habit of body are particularly liable to this variety. Two cases of this kind were seen by Dr Armstrong; in which the patients died comatose & convulsed. Autopsic examination revealed in both cases extensive engorgement of the lungs.

The peculiar symptoms of typhus fever, constitute the typhus, or as some have termed it, the malignant form of measles. It is a happy circumstance, that this variety of measles occurs so rarely as it is always terribly malignant & fatal. Nevertheless it has occasionaly prevailed as an epidemic Sir William Watson gives us the history of a putrid morbillious epidemic; but it may be doubted whether the affection he describes, was really measles or scarlatina, as the diseases were believed by him to be essentialy

the same.

Gastro intestinal irritation exerts a marked influence in some cases, giving rise to the gastric modification of measles. There is severe pain in the forehead, the tongue is brown; a sense of tension or fulness is often experienced in the epigastrium or short cutting pains distress the bowels. Violent vomiting & purging sometimes occur before and immediately after the appearance of the rash, which is pale & often indistinct. The cough is short, tormenting & almost incessant. There is occasionaly extreme restlessness, with much jactitation dyspnoea and an anxious expression of the countenance, particularly on assuming the erect attitude (Dr Armstrong).

Sequelae The tendency to irregular local determinations, observable throughout the whole course

of measles, is more especialy manifest during the periods of desquamation & convalescence. Few if any diseases leave the system with so great a susceptibility to the hurtful influences of cold or atmospheric vicissitudes, & hence chiefly the frequent supervention of inflamatory & other affections during convalescence

The most common sequelae of measles are pneumonia, bronchites, croup, otitis, arachnitis, Chronic opthalmia & rheumatism. Tubercular action is not an infrequent result in phthirical habits. Measles are often followed by an scrofulous opthalmia and tumors about the neck with other distempers of like character Porriginous eruptions on the head, & serous ulcers behind the ears, also frequently occur; and in some instances, induration of the mesenteric glands & marasmus. Among the occasional consequences are herpes, boils on

different parts of the body. discharges from the ears, & anasarcous swellings.

Diagnosis The diagnosis between rubeola & scarlatina is at times attended with much difficulty. The careful observer however will always be able to draw a correct diagnosis between the two diseases, from the catarrhal symptoms accompanying measles & the peculiarity of its eruption. The small vividly red spots, like flea bites; their union into irregular semilunar patches; & the natural color of the intermediate skin distinguishes the rubeolous exanthema from the large, irregular, more uniform & rasp berry colored efflorescence of scarlatina. In measles the rash is characterized by small red spots, blending with each other, and displaying central points more vivid than the coalescing margin so as to give a maculated

appearance to the skin. In the other affection the blush is more diffuse & uniform & the eruption consists of innumerable red points united together, resembling much the redness of a boiled lobster. The fourth day from the eruption of the fever, is the usual period of the manifestation of the measly rash, while in scarlatina is generally appears on the second & frequently on the first day. Prognosis Measles when uninterrupted in its regular progress & uncomplicated with internal inflamation is not to be considered a dangerous malady. However violent in its simple character, provided it proceed regularly in its course the hazard is generally but little. Percival calculated that about one out of fifty cases of rubeola terminated fatally; & in this proportion one half took place in subjects under two

years of age. Rubeolous epidemics, of terrible fatality have indeed been recorded, but owing to the imperfect diagnosis confounding small pox & scarlatina with it. The sudden retrocession of the rash, either spontaneously or from violent purging, the application of cold or any other cause, is hazardous. It is an alarming incident when inflamation of the lung, brain or trachea supervenes. Amongst the most fearful symptoms, are petechiae great muscular prostration & colliquative hemorrhages. In general nervous, debilitated & delicate subjects have more reason to fear danger than robust & healthy persons.

Treatment An active antiphlogistic treatment, where no internal local inflamations are present, is generally decidedly injudicious, even though considerable febrile excitement

should mark the eruptive fever. The eruption in this as in any other exanthematous affection, must be regarded, as an effort of the system to relieve itself from the noxious influence of some internal irritation by a critical or metastatic deposition on the surface the development of which is essentialy to the safe & complete resolution of the disease; therefore if the fever is regular & uncomplicated with internal inflamation we should abstain from severe measures & employ a gentle remediate treatment. It is requisite in such cases to keep the bowels in a soluble condition by employing mild laxatives make free use of tepid diluent drinks & prescribe some of the gently stimulating diaphoretics, such as infusions of sage, elder blossoms, marjoram, balm or eupatorium perfoliatum. A high grade of

of fever undoubtedly indicates the propriety of a moderate venesection. Small doses of antimonial Wine with sweet spirits of nitre the saline effervescent draft, & the ordinary nitrous powder may be employed.

After the initial stage of oppression if no reaction should ensue & the face remain pale & sunken, the pulse feeble & the breathing heavy with great muscular prostration & torpidity of the sensorial powers we must endeavor promptly & decisively to obviate the internal congestion & arouse the action of the heart & arteries. If this be not effected, the eruption will not come out & fatal stupor & coma will ensue. It would seem a prudent method to impart warmth & vigor to the system by stimulating frictions sinapisms to the epigastrium & bottles filled with hot water

applied to different parts of the body &
extremities. In addition to the the above
means the carbonate of ammonia has
proved very useful.

The disease is not so much benefited,
by the exhibition of these stimulants,
where the congestive state precedes the
exanthems, as when the rash after appea
ring suddenly recedes. In cases of this
kind with an irregular distribution
of the animal temperature, a conjunction
of camphor & opium is the appropriate
remedy. with the use of an ajacims stimu
lating frictions blisters & warmth to the
surface. We should remember however
that except in feeble subjects a moderate
diarrhoea is rather beneficial. (Armstrong)

Inflamatory measles require prompt
& decisive venesection both general &

& local. Antimonial emetics have frequently an excellent effect where bronchitis & pneumonia has supervened

In the remediate management of measles vicissitudes of temperature must be especially guarded against. When the eruptive fever is very moderate and the patient of a feeble irritable habit the air of the sick chamber ought to be so regulated as to communicate a sensation of warmth & this is also requisite in congestive cases. Stimulating drinks of whatever kind should be positively inhibited during convalescence & the diet should be light & unirritating.

There is occasionally dryness of the skin & a slightly febrile pulse after the appearance of the rash suitable remedies in these cases are the spir. mind. in union

with a small portion of sweet spirits of nitre and of antemonial wine.
When pectoral symptoms continue troublesome at this stage the mur. ammonia with acet. scillae and antimony are among our most efficient remedies.

Tonics are almost invariably injurious in convalescence from measles. If the system is left in an exhausted but an irritated condition, a weak infusion of serpentaria may be given; and this with mild & nourishing diet will soon restore health & vigor to the debilitated frame

Finis

An Inaugural Dissertation

on

Sympathetic Inflammation.

Submitted to the examination

of the Provost, Regents, and

Faculty of Physic,

of the

University of Maryland:

for the degree of

Doctor of Medicine

by

Joseph H. Hill.

of

New Madrid Missouri.

February 1845

To

Richard Wilmot Hall, M. D.

Professor of obstetrics and medical jurisprudence,

in the

University of Maryland:

In admiration of his profound medical knowledge,

unwearied devotion in the cause of science;

and

In grateful acknowledgment of kindness,

This Dissertation

is respectfully dedicated

by his pupil

and obedient servant,

Joseph H. Hill.

Through the medium of the brain and nerves it appears evident that all sensible parts of the body sympathize with each other either in a general or particular manner: the human body also considered as an organised whole is a very compliciated system comprehending in itself a great variety of subordinate systems, organs and textures; and in the different states of health and disease these systems act and are reciprocally acted upon by each other: — no sooner therefore does any of these subordinate parts of the animal economy receive an injury or become affected with disease, than changes are induced in the general system corresponding in some degree to the nature, seat and extent of the local affection.

In many instances where these local affections are internal and of course concealed from our immediate observation; these constitutional changes are often the chief if not the only marks which previous to death and the dissection of the parts we have of the existence of internal local disease.

That every sensible part of the body, has a sympathy with the whole will, sufficiently appear from the following facts.

Cold water thrown on any part of the body that is warm produces a sudden contraction of the vessels of the integuments, and thereby frequently checks small hemorrhages. — The effluvia of certain substances when smelled produce upon some persons very pleasant effects, while others are equally unpleasantly effected;

by the same. The effects of melancholy stories, or shocking sights; are well known to us, and particularly felt by delicate persons. — By means of different musical sounds various passions may be excited or calmed and diseases have been cured.

The first effect produced by the introduction of the bougie is sickness, the second is a sympathetic affection of the heart, which, failing to propel the blood in due quantity to the brain, occasions cerebral affection; the patient becomes light headed, his face becomes pale, and his muscles are no longer capable of ~~supporting~~ supporting the weight of the body, and down he drops.

When the stomach is in a sound state and digestion is properly performed, the

spirits are lively, and the body is light and easy; but when that organ is out of order, a languor, debility, melancholly and watchfulness, or troublesome dreams, the night-mare &c. are the consequences.

Grateful food, strong wine, or spirituous liquors, no sooner touch the stomach of one ready to faint from emptiness; than, they communicate new life and strength to the whole body; and this too instantaneous to allow of the supposition, that its nutritive parts (of the food) are taken up by the blood.

When the brain is wounded, inflamed, or otherwise injured, nearly every part of the body is liable to suffer, and vomiting, tremors, convulsions, palsies &c. often ensue.

Besides this general consent, which prevails throughout the whole body;

there is a particular and very remarkable sympathy between several of its organs, by means of which many operations are carried on in a sound state, and pain, convulsive motions, and other morbid symptoms are often produced in such parts as have no near connection with ~~each other~~ those that are immediately affected.

The following are some instances of this kind. — Wounds and contusions of the brain, generally occasion bilious vomiting. — Light and noise are offensive to the organs of sight and hearing in severe headache. — When one eye is affected with inflammation, cataract or gutta serenna, the other is often soon after attacked with the like disease.

The effluvia of spirit of wine,

inhaled through the nostrils, increase the derivation of the salival juice into the mouth, and sometimes stop a tickling cough.

Acrid substances applied to the olfactory nerves, bring the diaphragm, intercostal, and abdominal muscles into convulsive motions.

When the diaphragm is inflamed, the stomach, brain, and muscles of the face are affected by sympathy; as; appears from the delirium, vomiting, and risus sardonicus which attend this disease.

A disordered state of the stomach and intestines with wind or noxious humors lodged in them, will, sometimes so affect the brain as, to deprive one of their reason. — At other times, these same results will produce various other effects.

Inflammation of the liver is generally accompanied with vomiting and hiccough.

In suppuration of the liver, patients are affected with a numbness and debility of the right arm, thigh, and leg.

An irritation of the neck of the bladder or extremity of the rectum, may be the cause of a constant contraction of the diaphragm and abdominal muscles. — A stone or ulcer in the bladder is, attended with a sharp pain near the end of the urethra, especially after making water.

The uterus next to the brain has the most extensive sympathy; it is familiar to all to what degree of heat and pain

there is in the back and bowels about the time of menstruation, there are sufficient proofs of the consent between the uterus and several other parts of the body; but there is no part so much affected by the different states of the womb as the breasts; which, become more turgid before every appearance of the menses, and subside after the period is over.

The changes which happen to the breasts in time of pregnancy, and after delivery, are still more remarkable.

It is so generally admitted that all the different systems, organs and textures which enter into the composition of the animal economy, are liable to be more or less sympathetically affected by the occurrence of local inflammation: — inflammation of the stomach and bowels is attended, in the beginning, with a

shivering of the whole body; and great coldness of the hands and feet.

If local inflammation is seated in any part of the small intestines the stomach through sympathy may become as much diseased; as if it were itself primarily affected.

Stictures of the urethra have caused paroxysms similar to those of intermittent fever, and have frequently been mistaken for, and as frequently treated as a true intermittent fever by the profession.

The constitutional suffering which takes place when vital organs are affected with inflammation, is explained by the term sympathy.

Diminished action in one organ leads to increased action in another, and any disorder of one important function, embarrasses all the others.

We are well aware of the fact, that the organs secondarily affected are diseased, in as

much as they are supplied with too little or too much blood; or, if the organs affected be excretory, something deleterious is retained in the blood, which poisons to a certain extent the stream of life, producing embarrassment in all other organs, although one may shew it more than another.

This shows very plainly the sympathy which exists between the different organs.

But I do not say that sympathy, in every instance, has that bearing on every organ that it appears to have at first view: — for when inflammation is seated in the lungs, the heart suffers from two causes; first, because the function of respiration is impeded and the changes produced on the blood in the lungs are not properly effected; and secondly, because the circulation through the lung is obstructed.

This case sometimes is also reversed, the heart may be primarily affected; and there will be dyspnoea and cough, not from sympathy; but from an increased or diminished supply of arterial blood; and also by obstruction in the circulation.

Yet I believe that the nervous system is not idle all this time; and that it is intimately connected with the above cases.

Of the agent by virtue of which sympathies are developed we know nothing.

Physiologists are far from agreeing where to place this thing we call sympathy: we have no very distinct intelligence relative to its nature: but on this account we are not to question its existence; for with equal propriety we might doubt the sensibility or irritability of the body;

since neither of the qualities of vital matter has been at all demonstrated.

— Notwithstanding, this, we are persuaded of their existence, and also of the existence of sympathy. — Some ancient writers, and most of the modern authors, ascribe all the sympathies to the nervous system; it being the system most widely diffused in the animal economy; — the nervous system may establish sympathetic connection in two ways; first, the organs, between which the sympathies occur, communicating with each other through the ramifications of the same nerve; secondly, the sympathetic radiation terminating in the nervous center, whence it is reflected on one or several organs.

The individual who is irresistably compelled by his sensations, to believe that

immediate dissolution is impending over him, although there may be no real cause of alarm, suffers all the mental agony that he could do, if the dreaded event were actually taking place.

The most severe local pain, unless it arises from some disease or injury, which threatens immediate destruction to life, is trifling and of easy endurance; compared with that undefined and indescribable distress; which, in many cases, attend these sympathetic nervous affections.

In sympathetic inflammation, there will often be an excitement of the whole system, characterised by the following circumstances.

First, with regard to the sanguiferous system, we find that the pulse is increased

in all its attributes; it is more strong, more full, more firm, and more frequent than usual.

The secretions are also greatly changed; the urin is scanty, and high colored, the skin is dry, and hot, the tongue is dry, and white; and the bowels have a tendency to costiveness.

The respiratory system also partakes of the general constitutional disorder.

The nervous system of course is much excited; as it is one of the principal actors on the stage; — the patient suffering from neurosis is vigilant, he sleeps little if at all; occasionally he dozes, as though he had forgotten, and then he wakes up agitated and alarmed; and the patient who is in this condition will be found with the pupils of his eyes much contracted.

Shivering is a very common symptom

of inflammation, it is generally imputed to an affection of the stomach; it is a symptom of suppuration which, is invariably preceded by inflammation.

I give the symptoms of inflammation both local and constitutional, believeing that all inflammation is more or less sympathetically affected or, affects other parts through the aid of sympathy: there being such a universal sympathy of parts throughout the whole organized system;— for examples we take the following — vomiting and sickness at the stomach with violent pains in the head are often the forebodings of inflammation of the membranes of the brain or pericranium.

Nausea, vomiting, and costiveness attended with inflammation of the bowels, are indications of inflammation of the kidneys and ureters.

Redness, pain, heat, and swelling these

foud morbid phenomena attended with quickness and fulness of the pulse are the most important symptoms of inflammation.

Inflammatory fever commences with a sense of languor and inaptitude for exertion; with a disrelish for food, which continues for a day or too. — There is also chilliness and soreness over the surface with nausea and headache, succeeded in the evening by a great increase of heat; and at night by perspiration with great thirst, restlessness, and sometimes delirium:— often in young persons, convulsions with a stupid drowsiness.

The bowels are usually costive, the urin high coulered, and the pulse quick and hard.

The vital energy or simple animal life, seems to be impaired in inflammation of the stomach, in the same manner as sensation is lessened when the brain is injured.

The pulse is generally low and quick; the pain obtuse, but urgent and overwhelming; so that the patient can hardly bear up under it.

When the intestines are affected the symptoms are similar to those which are present in the like condition of the stomach, especially if the inflammation be in the upper part of the canal; but if seated in the colon the low and quick pulse together with the restlessness of the patient will be very marked.

Inflammation of the peritoneum is characterised by the symptoms pulseness, tension, and a general soreness of the abdomen, with purging and fever; the pulse is remarkably small, quick, and thready; and the slightest pressure on the part generally causes pain, accompanied with sickness and vomiting.

The symptoms attendant on inflammation of the womb vary according to the part of the

organ in which the inflammation is seated; if this be chiefly in the fundus, the greatest distress of pain, heat, and throbbing, will be above the pubes; if the posterior part be chiefly affected, the loins and rectum will principally sympathize, and there will be a troublesome tenesmus; if the inflammation attacks the anterior part, the bladder will also partake of the deranged condition of the system; the urin will flow with difficulty, but there will be a perpetual desire to pass water; while if the sidese of the uterus or its ovaria be chiefly inflamed the pain will dart down the interior of the thighs.

The symptoms in each individual case of inflammation, must of course vary according as the brain, the lungs, the heart, the stomach, and the other organs of the cavities are more or less affected. — In some instances the functions of the brain

remain~~s~~ undisturbed, even to the very close of the scene:— again when there is extensive disease within the cavity of the cranium the ~~delirium~~ patient or lys is more ferocious or comatose, or he may exhibit a variety of nervous symptoms, such as convulsions, rigidity of the extremities, tremors, or where the head is more slightly affected, the senses are only occasionally obscured.

If the lungs be affected, the breathing will be ~~attended~~ attened from that of health, more dyspnoea may however exist, without any structural lesion of these organs.

And the same diversity of symptoms will be found in the diseased state of other organs.

The appearance on dissections vary equally according to the particular organ diseased, and the duration of the inflamed condition of that organ.

We will find on investigation, as has been said, various grades of disorganization in

the same and different organs, according to the space of time they have suffered from their particular diseases, and the mildness or activity of those diseases.

The stomach like the brain being one of the all important organs in the human economy; and it being an organ of such acute sensibility; that it is not possible that the stomach should suffer from inflammation without suffering severely; and at the same time extending its diseased action widely around itself.

In many instances we are left to diagnose diseases without the general attendant symptoms, such as heat, redness, pain and swelling, we then distinguish it by the state of the general constitution, depression of the functions, and pain on pressure.

After death, in some instances we find that the stomach presents a red

appearance, there being a slight engorgement of the vessels of that organ, at other times we find a greyish appearance; sometimes a reddish brown, and again in a highly inflamed condition; and further the mucous membrane may be filled with large eruptive patches of inflammation, and the subjacent cellular tissue is advancing to a gangrenous state.

As I have said the small and large intestines partake of this inflamed condition as before spoken of: red patches, eruptions, ulcers and the like are often found in the small intestines; in the large these alterations are more rare, yet they are not entirely free from the remains of inflammation, and this may be safely said of every organ and tissue of the body.

The changes which the circulation of

inflamed parts present after death are very different from those in healthy organs.— The blood is conveyed from all parts with accelerated motion towards the center of inflammation: the arterial is not changed into venous blood, and its coagulatory power is much increased.

That there is a continual change taking place in all inflamed parts, must be obvious to every one from the fact of their being a highly increased action in the same;—and this change is much modified; and consequently more or less marked according to the seat of this action.

The healthy lung is spongy and crepitus under ~~the~~ pressure; in this altered state it no longer crackles between the fingers — its spongy character is lost — and it resembles liver in its

compactness and coolness: — softening is perhaps more strikingly obvious when it happens in the brain or spinal cord than in any other part of the body.

Inflammatory fever may sometimes be produced from febrile miasm, though it is commonly derived from other sources.

Of these the stimulous of violent passions is, perhaps one of the common causes; and especially upon a vigorous and plethoric habit; which is the usual temperament in which inflammatory fever makes its appearance: — undue muscular exercise, heating food, or excess of any kind may also be frequent causes; while another may be found in the suppression of any accustomed discharge; as that of menstruation, epistaxis, or periodical bloodletting.

Suddenly suppressed perspiration is in like

manner, a frequent perhaps the most frequent cause of any; especially, when the body is very hot, and the change is affected by exposure to a low temperature; as that of a current of cold air, a large draught of cold water, or plunging into cold water.

Disease is not apt to be excited from either the extreme of heat or cold of itself; but, in the sudden transition from one to the other; or heat conjoined with moisture.

The state of the mind has also great influence as well as the habits of the individual.

Drastic purgatives taken in excess, and poisons of different classes are also causes of this same diseased action.

Natural or accidental organic mischief in some part or other of the intestinal canal, as ventral, inguinal, or other hernias, or intussusceptions of various kinds; and also scybala, and the like.

Inflammatory diseases sometimes terminate abruptly, and with a critical sweat, or some other critical evacuation about the fourth or fifth day; but more commonly increases in violence, though with occasional declinations, for a week or more; during which time the pulse rises to a hundred or a hundred and ten strokes in a minute, but continues regular.

It rarely happens that some kind of constitutional treatment will not be of advantage in the management of sympathetic inflammation; and in the early stage of the disease we will find the administration of purgatives, diluents, and diaphoretics rarely failing to accomplish their accustomed beneficial effects. And the abstraction of blood by the lancet, will be found very beneficial and even necessary in many instances.

Most of the profession differ in opinion

in reference to the quantity of this fluid to be abstracted at a time or within a given time; — but the most liberal opinion seems to be; that we should be governed entirely by the case under treatment, for in some instances a few ounces might suffice while in other cases double the quantity would not be attended with the same beneficial results.

Local bloodletting is also to be resorted to, the scarificator and cups, or leaches, we will also find advantage in warm applications, by their contributing to the free flow of blood to the parts.

When the bowels have been well opened, opiates may be given with caution in union with ipecacuana or antimonials or calomel with a view to determine to the surface.

The diet of the patient should also receive due attention, as its exherts great influence for or against the patient, and we may say, for the

surgeon also:— the simplest diet is to be preferred, as barley water, gruel, and arrowroot.

Light must also be excluded, and tranquility of both mind and body is highly necessary.

Saline cathartics with diluent drinks may be used sufficiently free to keep the bowels gently lax, after they have been once well moved by cathartics, and emetico cathartics.

Tartarized antimony is one of the most efficient remedies, both in particular and constitutional inflammation of which we are in possession of; — this article should be used only as a nauseant medicine — it has in this respect great control over the pulse; and is said to do away in a great measure with blood letting; it seems that antimony when properly administered subdues the action of the heart and arteries; — ~~or~~ and in many instances this remedy may be used

when bloodletting could not be resorted to with safety:
— it is in inflammation of the mucous membrane
of the air passages; antimony is signally beneficial.

Ipecacuana is also much used as a nauseating
medicine. It is often necessary to resort to stimula
nts; to rouse the depressed and sinking powers of
life. The exhibition of camphor, ammonia,
and wine; may prove of the utmost value
in certain cases, which form as it were exceptions
to the general practice in the treatment of
inflammation. In the severe forms of diffuse
suppuration, the system will require to be
supported by allowing the patient the free
use of generous food, and stimulating liquids.

It will often happen that the stomach
of the patient will nauseate such food as
is usually deemed nourishing; and then the
chief reliance must be on soups, spirits, wines,

and malt liquors.

In sympathetic inflammation local depletion is often to be preferred to general bloodletting. — Local abstraction of blood seems to have a more decided impression on the disease, than when a large vein is opened at a distant part from the seat or origin of the disease.

Cold applications is also an important agent in the management of some forms of inflammation.

Counterirritants is another class of remedies to be resorted to — the articles in general use are the sinapism of mustard, the common tincture of canthar-ides ung. and when a more lasting effect is desired, the potential or actual cauteries may be resorted to, or the

section may be employed, — either of those
may be used according to the case in question.

An

Inaugural Dissertation

on

Hemorrhage

Submitted to the Examination

of the

Provost, Regents, and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

Session of 1844 & '45

by

D. Stell Cromise

of

Maryland.

To,

Prof^r. Nathan R. Smith

Distinguished in his Profession no less for his ability than kindness of heart, and who has is so many instances in the course of my studies manifested so great and disinterested favor towards me, this Thesis is respectfully inscribed, as a slight acknowledgement, by one who will ever esteem it an honor and privilege, to be considered

A friend,

J. Stoll, Cronise.

Hæmorrhage.

It is not the intention of the Author of this Thesis to consider any of those forms of Hemorrhage which are the result of appreciable injury to the blood-vessels, and which more properly belong to the province of Surgery, but those committed to the care of the Physician, less perfectly understood, which frequently take place without any perceptible alteration in the anatomical condition of the part whence the blood escapes, and which arise spontaneously from some pathological condition of the body itself.

In some cases Hemorrhage seems to constitute a whole disease being the only morbid phenomenon we can detect; at other times it forms the principal sign or indication of local disease; while again it may be merely an accidental symptom.

The

The tissues most liable to hemorrhages are those which in the natural state are subject to variations in the quantity of blood, as mucous membranes the parenchyma of organs &c.

Some states of the system seem to induce a more special tendency to hemorrhage; such are the changes which occur in organs and functions at particular ages; as childhood prone to Epistaxis from general activity of the vessels of the head, or as has been thought, from the development of the sinuses and fossa of the facial bones by the gradual separation of their tables, in harmony with a similar process of the bones of the cranium.

For some years after puberty the lungs are the most frequent source of hemorrhage, for the same reason that they are rendered liable to Congestion at that period, by that increase of their development and exercise which takes place

correspondently

correspondently with the activity of the muscular and generative systems.

In advanced life we meet with hemorrhages from venous obstruction and from diminished vital action upon the intestinal surface generally, but more particularly at the termination of the rectum. The frequency of cerebral hemorrhage is probably not so much owing to these causes as upon disease in the substance of the organ or in the coats of the arteries.

Mode. In a majority of instances we find a large quantity of blood effused into cavities of organs and upon tracts of mucous membrane and even from the skin which cannot be attributed to the rupture of a vessel, as no such breach, even by the aid of the highest magnifying power, can be discerned. Exhalation then, as it has been termed, is undoubtedly the mode in which the

greater

greater number of hemorrhages take place.

Watson says, that it occurs from the same vessels or apertures which in health pour out the fluids natural to the part, is rendered the more probable by the fact, that certain hemorrhages are preceded and followed by an afflux of the fluids belonging to the surface concerned.

In regard to cerebral hemorrhage it should be stated that this form more generally results from a rupture of a vessel, than by exhalation.

Causes. As a predisposing cause of hemorrhage we may mention that condition which occurs in young and robust persons who live fully and freely, and are subjected to those causes calculated to produce a plethoric state of the system, accompanied by forcible action of the Heart and Arteries, as indicated by full strong pulse. Plethora is therefore not unfrequently the cause of hemorrhage

from

from the nose, rectum and into or upon the Brain.

Congestion producing nervous obstruction is a frequent cause of hemorrhage; as Pulmonary Apoplexy from disease obstructing the flow of blood through the left cavity of the Heart; and Haemoptysis from obstructed portal circulation - This is also an operative cause in apoplexy following use of Narcotics or from violent mental emotion; crowded rooms producing a congestive state of the Schneiderian membrane and Epistaxis; irritants causing an effusion of blood from the mucous membrane of the Stomach; pressure upon the jugular veins, preventing a return of the blood, causing Apoplexy; Purpura Hemorrhagica on the legs of pregnant women from pressure of the Uterus upon iliac veins and vena cava, preventing return of blood from Cutaneous vessels, followed by Extravasation in patches &c; From Congestion existing upon a

lower

lower vital action in a part, as upon the skin when it has been under the influence of Cold. This Cold by its astringent operation producing internal congestion if not sufficient to give rise to inflammation may give be the cause of internal hemorrhages.

Williams alludes to Atony of vessels as a cause of hemorrhage, as we see this condition exemplified in Congestive fevers and in weak debilitated subjects. In this state we sometimes have hemorrhage occurring from a change of posture, as Cerebral from Stooping and Uterine from assuming the upright posture.

Determination of blood has been also considered as an exciting cause of hemorrhage, but as this term is not infrequently used to mean nothing more or less than Congestion, and as this state cannot obtain without at least temporary Congestion, the author of this thesis does not think it necessary to discriminate in this place between the two.

The connexion between Inflammation and Hemorrhage seems not to clearly understood. It has been supposed that the reason we have hemorrhage less frequently in inflammation than Congestion, notwithstanding that there is in the former greater tension, is, that the blood having become stagnant, has lost its fluidity and that the pressure upon the capillaries has been diminished by the exudation of serum, lymph and pus. But Inflammation is always preceded by Congestion, and from the vessels in this condition, rather than in pure Inflammation, have we hemorrhages occurring. Hemorrhage coincident with Inflammation, however, is exemplified in that which occurs from the colon in Dysentery, where we have constant exudations of blood with the increased mucous serum &c. In the rusty and Sanguinolent sputa of Pneumonia, a viscid secretion from the

the cells and minute bronchiæ impregnated with a coloring matter from the blood; — in Hemorrhagic Pleurisy where we have bloody serum and lymph from the inflamed serous membrane; in inflamm of the Kidney and Bladder we have occasionally superadded Hematuria and I might perhaps add under this head of Inflammation, that which results from an alteration of normal tissues by softening and ulceration or a new growth as the fungoid form of Carcinoma.

But to render the foregoing instances of hyperæmia effectual in all cases to the production of hemorrhage, some additional element is generally wanted, and this is found to be either in the blood, or the vessels containing it.

We can trace this disposition sometimes to a morbid condition of the blood, being deficient in fibrin, as shewn by its imperfect coagulation produced

Some think an alteration in the quality of the red particles and fibrine is the pathological element in these diseases, as exhibited in the darker hue of the coloring matter in some malignant fevers, congestive typhoid, scorbutic and syphilitic diseases and also in all inflammations and ecchymoses in the skin to produce livid, purple or copper colored blotches.

A vitiated condition of the blood may occasion hemorrhage partly on same principle by which it induces passive congestion and partly by the indisposition to coagulation. This state of the blood is always accompanied by low vital action in the tissues as well as on secreting surfaces, and hence perhaps the readiness with which the capillaries give way to distention. Examples of this are seen in the petechiæ and vibices of malignant fevers, but still more remarkably from the cutaneous and mucous surfaces in scurvy &c.

produced by general disease or any cause preventing the due arterialization of the blood or allowing the venous to be mixed with the arterial blood. In adynamic fevers the cause of the petechiæ, vibices &c has been supposed to be a want of fibrine in the blood.

An abundance of the red particles of the blood seems also to play not an unimportant part as in Congestive apoplexy &c. The sanguine temperament which is particularly prone to certain forms of hemorrhage, has been proved to be characterized chiefly by an excess of the red particles of the blood, rising perhaps to 185 in 1000.

But again we have a condition of the blood predisposing to hemorrhage, said to be characterized neither by deficiency of fibrine nor any increase of the red globules of the blood. Of this we have examples in purpura, Scurvy &c.

Some

We have also that condition of the blood which has been supposed to be the essence of the hemorrhagic diathesis, in which there is a tendency to hemorrhage, sometimes to a fatal extent, from the slightest scratch.

Diagnosis. The existence of internal hem: during life is sometimes indicated by the peculiar functional disturbance of the organ which is the seat of it, as some forms of Apoplexy; sometimes by physical signs, as in Pulmonary Hemorrhage; and again by the rapid sinking of the vital powers, as in hemorrhage into the abdomen from Extra Uterine pregnancy &c. When Hemorrhage is actually seen, that is, the exit of blood cannot escape the attention of the observer, but to diagnose it correctly, to find its seat and to ascertain its cause, is not so easy a matter, and often requires the nicest discrimination, and an ability to recognize by physical signs or otherwise, any change which may have taken place in the structure of an organ.

This is not unfrequently a source of embarrassment to the Practitioner, Knowing as he does that upon a proper diagnosis will depend a correct Prognosis and a faithful therapeutic management of the case.

Varieties To render the subject more intelligible certain varieties have been recognized by writers and may^th^ fairly and properly continued by us, inasmuch as we discover them in practice and are Enabled in our therapeutic agency to be guided by these forms in which Hemorrhage is presented.

In the first place we have Spontaneous hemorrhages divided into Constitutional and Local - and secondly, Constitutional subdivided into active and Passive; and Local subdivided into Sympatomatic, embracing those in which the hemorrhage arises from the Organ whence it is poured forth, and into Sympathetic, denoting that class of hemorrhages which occur from other Organs than that from which the blood is poured

forth

forth, that is, those arising from obstruction to the circulation of the blood in an organ, from disease in another organ or part.

Hemorrhages may be generally ascertained to occur, 1st As symptoms of constitutional disturbance independent of local lesions, and 2dly As symptoms of Changes of Structure in different Organs.

1. Constitutional Hemorrhages. These appear often to be the result of some peculiarity of constitution, as we have stated before, rather than of any pathological condition of the body itself; they take place alike in the robust and delicate and may occur in almost any organ of the body. They may also observe a periodicity in their attacks, and when these are suddenly suppressed they are generally followed by what has been termed vicarious hemorrhage, in that it appears in some other organ and recurs perhaps periodically.

We also observe frequently what would seem

seem to be a predisposition on the part of certain individuals of the same family to hemorrhages from various parts of the body upon the receipt of very slight injuries. Several instances of this kind are recorded. and one should be led to suspect some faulty condition of the blood or its vessels as the predisposing cause in the production of such hemorrhages; and it is rendered not improbable also that these individuals have inherited this peculiarity or fault of their physical structure.

There are other hemorrhages entitled to be considered constitutional which are preceded by various derangements of innervation, nutrition and of the circulation. These may be attended by signs of plethora, fulness of blood and increased action of the heart and arteries and are to be considered as Active, while those attended with constitutional debility, as Passive.

In well marked cases the distinction

between

between Active and Passive is sufficiently strongly marked to enable us to diagnose with a degree of positiveness; as for instance, the active form occurring in young and robust persons who live freely and fully, and are subjected to those causes calculated to produce a plethoric state of the system, accompanied by forcible action of the Heart and Arteries, as shewn by a full & strong pulse - And in such cases an attack may not unfrequently be traced to some over stimulation, violent mental emotion, or exposure to wet, cold &c but more generally will the predisposing causes themselves be found sufficient to have excited the hemorrhage.

The escape of blood from the body is usually preceded by certain symptoms, such as a general feeling of indisposition, sudden flushes of heat, pain, wandering perhaps at first, but gradually settling to the point whence the blood ~~escapes~~ is poured

poured forth; frequently a full, bounding or jerking pulse, often accompanied by a peculiar thrill, which is said to characterize the tendency to hemorrhage, and has hence been called the hemorrhagic pulse.

Local symptoms are also generally manifested to the patient or observer, as a sensation of weight or heat in the part, increased force of the arterial pulsations or turgescence of the veins, indicating an undue afflux to the part, accompanied with paleness and chilliness or coldness of the surface.

Passive Hemorrhage — The symptoms of this form, in well marked cases, are of a contrary nature. They occur in enfeebled debilitated constitutions, in those whose systems have been weakened by disease, fatigue, imperfect nourishment, profuse discharges &c in fact any cause whatever which has brought about an anemic condition with a change in the relative constituents of the blood, as alluded to

to in the first part of this paper when speaking of a state of the blood favoring exhalation or the effusion of blood from the parietes of the vessels containing it, will dispose to this form of hemorrhage. The passive form is not generally preceded by any constitutional excitement, as in the active form, nor is the hemorrhage followed by any relief of the symptoms, but rather an aggravation of them. The blood is usually not florid, but dark, serous and indisposed to coagulation.

If much blood be lost in this condition all the symptoms are greatly aggravated, the previous debility has now become extreme, the action of the heart not diminished, the face, lips and tongue pale and the countenance assumes a peculiar expression, waxen hue, while the surface of the body loses its temperature. The hemorrhage thus does not alleviate the existing condition of the patient, but leaves

leaves him in a much worse one and more liable to a relapse;- and thus if the condition of the system is not overcome, he is gradually more and more debilitated, until in some attack his life is ended.

Effects. The local effects will depend greatly of course upon the organ whence the blood is effused and also whether that organ has any natural outlet to the surface of the body. The local effects are always manifested by disturbance of the functions of the organ, if the direction of the blood be towards the surface, and this be easy and not interrupted, then is relief soon obtained; but, if on the contrary, there be no communication with the exterior of the body, as in the case of the serous membranes, then are the local effects serious on account of the effused blood becoming a source of permanent pressure and irritation to the important organs invested by those membranes, as the Brain, Heart, Lungs &c.

These

These local effects are still more alarming when the effusion takes place into the interstitial cellular tissue or into the minute parenchyma of an organ. Here the function is not only disturbed, but the structure is often permanently injured.

In regard to the constitutional effects of spontaneous hemorrhage, if the blood be poured out rapidly and in large quantity, the phenomena are similar to those which occur in the wound of some large vessel, but if there be a succession of moderate hemorrhages and but little blood lost at any one time, then have we phenomena much more permanent and enduring. The appearance of persons who have thus lost so vital a fluid, is striking and may be easily recognized. All parts of the surface of the body - the ears - lips, tongue and lining membrane of the mouth &c seem to possess nothing but a serous circulation. The hands and feet are cold perhaps

while

while the head is hot, and the least muscular exertion producing excitement of the Circulatory and Respiratory Systems.

And if patient should not sink in this condition the heart recovers from its first state of debility and reaction comes on, as evinced in the palpitation of the heart, pulsations in the course of the aorta, beating in the Epigastrium, increased throbbing of the carotids, temporal and other arteries of the cranium. The pulse is generally frequent, easily accelerated upon muscular exertion or mental emotion, and communicates to the finger a peculiar thrill or vibration, which may be mistaken for hardness. Pressure, firm and continued, upon the artery, however, will prove to us, that it is not possessed of force or strength This has been well defined to be, 'a tricity without power'

This condition may alternate with Syncope, Especially if patient attempts to assume the upright posture

posture or use any muscular exertion. As a result of this activity of the Heart and Arteries and the loss of blood, we have also certain Nervous Symptoms, as throbbing in the head, great intolerance of light and sound - or if graver, delirium and coma, or even confirmed Mania.

Treatment of Constitutional Hemorrhages. There are certain general rules to be adopted in the treatment of hemorrhages of this variety, but these will, of course, be greatly modified according to the organ whence the blood escapes. And 1st as to Periodic Hemorrhages. When moderate they may be regarded as the natural remedy to the condition which gives rise to them and should not be interfered with, except in certain peculiar circumstances, as for instance, if they be excessive or deficient, or have been suppressed; or if the seat of such has been changed it is thought best to reestablish the original drain.

But if the symptoms from the first have been

been very active, the loss of blood followed by very great exhaustion, then does it become our duty to interfere, by surrounding patient with cool fresh air, preventing all muscular exertion or mental Emotion, allowing nothing but the most unstimulating food and drink - in short prevent all undue action of the Heart and Arteries, Keeping the patient in that posture which is least favorable to the afflux of blood towards the part affected, as the horizontal when from the lower, the Erect when from the upper parts of the body.

Of other remedies to be Employed in the treatment of profuse active hemorrhage, Venesection is of course the most valuable and important. We should infer this, a priori, as one from it to have the effect to lessen, above all other Agents, the force and frequency of the heats contractions, reducing general plethora and removing local congestions upon which the hemorrhage is likely dependent, and also of

directing

diverting the current of blood from the suffering organ. In the employment of this agent we will be governed by the circumstances of each case, both as to the amount of blood to be abstracted and whether a single bleeding be sufficient or a repetition of it demanded.

Purgatives are also valuable agents in the treatment of hemorrhages, as they act as powerful derivants and are of great efficacy in both active and passive hemorrhage. Astringents also afford us valuable aid. Cold is often of great utility and acts in this way, by constringing the vessels of the part and thus preventing the further effusion of blood. It may be applied to the temples, as to the forehead in Epistaxis, or directly to the heart, as when ice is swallowed in Hæmatemesis, or injected into the rectum or Vagina in Hemorrhoids and Uterine Hemorrhage.

It may be proper here to say a few words in regard to the prophylactic treatment in

such

such cases. The patient should avoid all causes calculated to induce plethora, and those which tend to promote an afflux of blood to the part which had previously suffered, and if the organ is likely to suffer from the presence of effused blood it is proper to establish a permanent drain or derivation of the circulation towards some other part, as an issue after partial recovery from Apoplexy; and if premonitory symptoms present themselves it will be proper to abstract a moderate quantity of blood.

Treatment of Passive Hemorrhage. In the therapeutic management of this form there are two obvious indications: 1st to arrest the further effusion as speedily as possible; and 2ndly to remove that condition of the system upon which they depend. Venesection in most instances is contra-indicated and we are obliged to resort to other remedial means. Cold is often highly efficacious, and in this form also, do we often resort to certain

internal

internal remedies which have been found useful in the management of passive hemorrhage. Tonics and astringents are especially called for, among these, of the mineral kingdom, are acetate of lead, sulphuric acid, alum, sulphates of Copper & Zinc &c and belonging to the vegetable kingdom, galls nutts oak bark &c. Of all these, it is probable, acetate of lead and alum deserve the highest credit; the others, however, may occasionally prove salutary and useful.

To accomplish the second indication the patient should be guarded in his diet, breathe pure and bracing air, and exercise in it as much as may be consistent, carefully avoiding all mental and bodily fatigue - and where we have reason to believe the blood to be faulty, we should cautiously resort to the ferruginous compounds.

We have now done with Spontaneous hemorrhages depending upon constitutional causes,

and

and althó this thesis has been extended farther than was designed, we should be considering the subject but very partially did we overlook those forms of hemorrhage evidently dependent upon alterations of structure of different organs and not owing particularly to constitutional derangement.

These will be found to embrace many that the Practitioner meets with and by which he is often baffled, if not in ascertaining their cause, thó this is often difficult, certainly in extending any permanent relief to the patient.

These, as I have stated before, have been divided into Symptomatic and Sympathetic, the first embracing such as occur from organs themselves diseased, and the latter considered merely as symptoms of disease in other organs than that from which the blood escapes.

We may have hemorrhage occurring from a local lesion induced by inflammatory Congestion, either in the Congestive Stage of this

process

process, as we have pointed out in the early part of this paper, which may thus be the means of stopping the inflammation, or as more rarely occurs, after this process has been fully established. The condition of the blood, however, in these two pathological conditions, is generally widely dissonent, for while in inflammation we have a large proportion of fibrine, in this Hemorrhagic condition this constituent of the blood is more generally deficient.

Again as another cause of Symptomatic Hemorrhage we have the various results of inflammation, as induration, softening and ulceration of tissues, as any sudden afflux of blood to organs in either of these conditions, may be followed by hemorrhage, or in the progress of ulceration a blood vessel may have become eroded.

Again as another example of hemorrhage from an organ being symptomatic of local disease in it, we need only refer to tuberculous deposition in the Lungs: indeed Louis conceives copious

hemorrhage

hemorrhage from organs tubercle of the earliest symptoms of such morbid depositions or growths.

The writer will conclude by briefly alluding to such as have been denominated Sympathetic Hemorrhages, those occurring from an organ not itself the subject of disease; as Hemorrhage from the Lungs produced by valvular disease of the left side of the Heart: Hemorrhoids or Effusion of blood into the intestines from induration of the Liver or any other obstruction of the portal Circulation.

The Symptoms of these forms of hemorrhage are not so uniform as those which characterize and accompany the Active and Passive forms of Constitutional hemorrhage, but refer rather to the organ the subject of lesion:- thus in Hemoptysis from the presence of tubercles we have evidence of this deposition from physical and rational Signs or Symptoms - or in Hemoptysis from valvular disease of the Heart, we have this

reluct

result preceded for a long time by disordered function of the viscera, and revealed by signs denoting the transformation of structure.

In the Treatment of these forms, which must frequently can be merely palliative, if even this, we must have regard particularly to the organ the subject of lesion.

An
inaugral
Thesis,
on the dislocation
of the Patella; submitted
to the Faculty of Phy-
sic of the University
of Maryland
for the
title
of Doctor
of Medicine; by
Edmund F. Colburn

Baltimore February 1845

A Thesis on the dislocation of the Patella.

Dislocation Outwards.— The Patella is subject to dislocation in three positions, which are outwards inwards and upwards. The most frequent of these is the outward dislocation, the bone having been forced upon the external condyle of the os femoris where it projects markedly. The occurrence of this abnormal tumefaction and the impossibility of flexing the leg upon the thigh is an undeviating sign of what has really occurred.

Causes of the Accident— It may be occasioned by a blow from a club, a kick from a horse, and other direct violence: but the most common way of producing this dislocation, is this; a person in the act of locomotion, walking or running, gets an unfortunate fall, his knee being turned inwards and his foot outwards, acting as

the point of a lever, and thus by the action of the strong muscles attached to the Patella endeavoring to rescue the person from a fall, the bone is displaced over the external condyle of the os femoris; now as the person wishes to resume the wonted perpendicular position of his body, he halts on account of an obstinate stiff leg, the muscles and ligaments of the patella conspiring to work wrong.

The persons most liable to this accident are those whom nature has not endowed with symmetrical limbs the knee being inclined inwards, which physiologically, under the action of the strong extensor muscles, directs the patella outwards.

Dislocation Inwards:- This dislocation is not so frequently met with. It occurs from the patients falling on projecting substances, from which the patella receives a

blow upon its outer margin, or perchance by the foot being inclined inwards at the time of falling, in both of these cases the ligamentous fibre inserted into the side of the patella will be ruptured, provided they be not in a pathological condition which has relaxed them at the time of the supervention of the injury.

There is another condition of the patella not heretofore mentioned. It is the occasion of the most acute sickening pain and faintness. The accident to which I allude is a partial dislocation of the patella outwards which is an occurrence of no little frequency.

Treatment — The first step we take is to reduce the dislocation, to do this we situate our patient in a recumbent position, an assistant elevates the leg by grasping the heel, which will relax the ex-

tensor muscles situated on the thigh.

The surgeon may then bear down upon the patella which will resume its normal situation with but little difficulty.

This being accomplished an evaporating lotion of alcohol and water may be applied. In the space of three days we can apply a bandage which should be equally adjusted commencing at the foot and ending above the knee, if we continue it up the thigh and pass a turn or two round the hips it will do no harm and we will make sure of perfect rest to the limb since the muscles cannot contract under a well adapted bandage. The patient at the same time will not experience the slightest inconvenience from the bandage more than though it were not applied. In a short

time nature will do her work and all will be as before save that a slight weakness will remain.

Cases of difficulty— There are cases of dislocations of the patella wherein we may find trouble in their reduction.

A person may be walking, get a fall and receive an injury of the patella. Mr Cooper cites a case which fell under the treatment of Mr George Young where the patella was dislocated outwards and caused some difficultty in being reduced.

The sufferer was a female who by falling had the patella slipt over the external condyle of the femur, where it firmly lay. He endeavoured by pressure to reduce the dislocation; with no effect. Finally by

placing the woman's heel upon his shoulder he caused the relaxation of the strong mus= cles. Thus much accomplished he placed the ball of his thumb against the edge of the patella which quickly resumed its place under the force applied.

This may be considered simple dislocation, whereas other forms which are much more difficult of reduction may be called complicated dislocation if I am permitted to perpetrate the titles of distinction. The bone may be so thrown out of its place as to be turned half round so that it may rest on its edge and we will find by giving a case, the truth of this assertion.

This I beg leave to copy from Mr Cooper's excellent work on the subjects of dislocations and fractures

Mr Welling, formerly surgeon at Hastings, was called to a case in which the patella was dislocated upon its edge.

"The nature of the accident was very obvious, as the edge of the bone forced up the integuments to a considerable height between the condyles on the fore part of the joint. Mr Welling reduced the dislocation, but with considerable difficulty, by pressing the edge of the bone in opposite directions when the leg was extended." One or two more cases perhaps will not wear upon the patience of my readers, as they are exceedingly interesting to fathers of science.

"I was called, says Mr. Mayo, to
"a consultation by my friend Mr Brough-
"ton, upon the dislocation of the patel-
"la, which had occurred on the follow-

"ing circumstances; A private of the sec-
"ond Life-Guard a stout muscular young
"man, was struck sharply on the right-
"knee by the knee of another soldier, as
"in the exercises two opposite lines rode through
"each other. They were riding at a walk,
"~~but~~ but the soldier on the right of our pa-
"tient had spurred his horse, so that it
"moved forward briskly. By this accident
"the patella was dislocated outwards and
"rested with its inner edge upon the
"outer surface of the external condyle,
"the fore part of the patella facing for-
"wards and inwards. As the patient
"lay with the knee extended, he expe-
"rienced no pain; there was no tension
"of the quadriceps extensor cruris; the
"patella admitted of a slight degree of
"motion forward or backward, turning upon

"its inner edge, which seemed caught behind
"the prominent margin of the articular
"surface of the condyle.
" We tried the following methods to re-
" duce the dislocation: 1 The knee remain-
"ing extended we prefsed the outer edge of
"the patella downwards, forcing ~~the bone~~
" the bone at the same time strongly in-
"wards. 2. Force was applied in the
" same manner, the joint being rather
" more than half bent. 3. We used the
" same sort of prefsure, beginning it
" while the knee was bent, and contin-
" uing it forcibly as posible at the mo-
" ment that the joint was brought to the
" extended position. Bending the knee
" to the extent described we found gave
" the patient great pain, and caused the
" patella to move not obliquely but directly

"forwards. These attempts proved unavailing,
" and we left the patient for a time. In
" the afternoon we met at the Anatomical
" Theatre in Great Windmill Street, and
" examined the nature of the dislocation
" in a dissected limb, when we found
" that upon bending the knee to the utmost
" the condyle was almost wholly drawn a=
" way from the patella; and we thought
" it reasonable to expect that if the joint
" in our patient should be found to admit
" of perfect flexion, the patella would in
" that case, as we had seen in the dis=
" sected limb, become disengaged from
" the condyle, and the dislocation be spon=
" taneously reduced by the action of the
" quadriceps extensor cruris.

" We returned to the Barrack Hospi=
" tal, and our patient expressed his willing=

"ness to submit to the experiment which
"we purposed to try. He was laid upon
"the left side, and his right ankle was
"grasped by a comrade, who, when we
"bade him, suddenly carried the heel
"back to the hip thus bending the knee
"to the utmost. The motion was hardly
"completed when the patella audibly returned
"into its socket.

This though rather a difficult case was not equal to another, mentioned in Sir Astley Cooper's excellent work on dislocations & fractures, P. 179 Case CX. Ed. 1844.

Daniel Steinbeck, a young soldier in the "Hussars of the Guard," was riding at a moderate walk, 27th Dec, 1823. when he came in collision with a fellow soldier, dislocation of the patella was the immediate consequence. He was gently taken from the

saddle and conveyed to the hospital. It was found on examination, that the patella had taken a semi revolution on its longitudinal axis; its right lateral edge was firmly held in the trochlea, in the middle of the condyles of the os femoris the surfaces were perfectly reversed, the inner out, and the outer in. After mature and sage deliberation it was decided that the patient should undergo an operation, accordingly an incision was made commencing one inch above the patella extending inferiorly to the sharp edge or spine of the tibia. The tendon was fairly exposed, after a few strokes of the knife divided; all this was productive of no benefit, now the tendon was divided near its insertion (Wilson says it is proper to consider the patella as a sesamoid bone developed within the tendon of the rectus; and the

ligamentum patella as the continuation of the tendon to its insertion into the spine of the tibia" nothing towards success and the case was abandoned. The bleeding was not great, and sutures were used in closing the wound.

In the lapse of time the wound went on to suppuration which occasioned an abscess in the posterior femoral region which was punctured and the matter evacuated.

In March chronic inflamation of the bowels appeared, in September "general oedema and ascites;" the latter of which gave the patient his deathstroke. He sank on the eighteenth, November, 1824.

There is room here at least for one question, which is, would not the patient have done better, had the patella been left as it was found? This interrogation may perhaps be answered only, by trying the

experiment should a like accident happen.

If we should prognosticate what would be the termination of the case we would very rationally infer that the worst end would be an amputation of the leg above the knee. In what case would this be necessary? The cartilages of the joint covering the patella, the head of the tibia, the condyles and the trochlea of the femur might (from the irritability caused by the abnormal position of the patella) undergo ulceration and even suppuration.

The patients constitution may under these circumstances become reduced through the intervention of hectic accompanied by severe pain and sleepless nights, finally life being endangered, amputation would be justifiable to save it.

But it is hardly probable that things would

wear so formidable an aspect, provided skil-
ful treatment was placed in opposition to
the threatening symptoms. Yet we might
suppose that under the best medical and sur-
gical advice anchylosis would be inevitable.
For the constitution must be supernat-
ural indeed, that could resist inflamation
and ulceration under such adverse circum-
stances.

In Mr. Cooper's observations on this case
he seems to consider the incision into the
capsular ligament of minor consequence, or
as a minor cause in kindling the de-
structive inflamation which was set up
in the joint. "Of far greater consequence" says
he "was the reduced patella, which contributed
to the inflamation succeeding the accident,
and by the pressure exercised on the car-
tilaginous covering of the femur, occasioned

its destruction. Undoubtedly the patella,
severed as it was from the muscle and the bone,
proved the main source of the inflamation, for
it may perhaps be thought with a deal
of truth, that the patella acted partial-
ly as a foreign substance chinked in
the joint. When we reflect that the
patella was by the accident torn from
the surrounding teguments we cannot
but suppose that after the division
of the tendons, or its isolation from its
tendon that it would cease to receive
a sufficient quantity of nutriment from
the vascular system to maintain its
wonted vitality and therefore die.

Without further remark we proceed to
mention "Dislocation of the patella up-
wards" It may be well to inquire,
how this is to occur? It takes place

only when there is a sufficient force exerted to lacerate and rupture the ligament of the patella by contraction of the rectus femoris muscle, which action inevitably must draw the patella above its natural position. It is easy to diagnose the nature of this accident. The decided elevation above the condyles of the os femoris occasioned by the patella and the deep depression where the patella ought to be, is self evident of the injury ~~[illegible]~~

Treatment. Active antiphlogistic treatment should be adopted. Leaches may be employed over the parts effected; evaporating lotions will be beneficial in reducing the excitement of inflamation, when this has subsided a roller may be useful about the foot and leg, to support the

only when there is a sufficient force exerted to lacerate and rupture the ligaments of the patella by contraction of the rectus femoris muscle, which action inevitably must draw the patella above its natural position. It is easy to diagnose the nature of this accident. The decided elevation above the condyles of the os femoris occasioned by the patella and the deep depression where the patella might to be, is self evident of the injury ~~[illegible]~~

Treatment. Active antiphlogistic treatment should be adopted. Leaches may be employed over the parts affected; evaporating lotions will be beneficial in reducing the excitement of inflammation, when this has subsided a roller may be useful about the foot and leg, to support the

the fleshy parts and suppress swelling.

Extension of the leg upon the thigh must not be neglected, since this is one of the most important steps in the successful treatment of this dislocation, this can be effected by a splint behind the knee joint and an apparatus is to be adjusted so as to bring down the patella as near as possible to its natural location.

When the surgeon is convinced that union of the ligament has occured, it will be well to advise moderate exercise of the joint, to prevent as much as possible, the deformity which is apt to occur, while the cure progresses it will not be improper to keep the patient in a sitting posture, that the rectus femoris muscle may be relaxed, and

more perfect union of the injured ligament obtained.

Baltimore
January
1865

An Inaugural Dissertation
On
Erysipelas
Submitted to the examination
of the
Provost Regents &
Faculty of Physic
of the
University of Maryland
For the degree of MD
by
J & M Gordon
of
Piqua Ohio

March 1845

Respectfully Dedicated
to the
Faculty of Physic
of the
University of Maryland

Respectfully Dedicated
to the
Trustees of Wayne
of the
University of Maryland

To Dr J R W Dunbar

It having been a long established custom to dedicate Inaugural Dissertations; on the present occasion I greet the custom with truely heartfelt pleasure that it affords me an opportunity to show at least in a small degree that high respect which I bear to one whose high wrought talents and scientific character is only surpassed by his moral worth as a man

With many desires and hopes for a continuance in that high and lofty path of renown which has been so deservedly won

I Remain yours humbly

J L M Gordon

Erysipelas

This disease has been neglected from the exanthemata, by some authors, simply because it is not contagious, and may recur frequently in the same individual. Its study is useful by throwing light on the kind of connexion and sympathetic action, direct and alternate between the skin and internal organs. Erysipelas is a disease extremely common in almost every part of the world, but perhaps of more frequent occurrence in some portions of the United States, than in other parts of the world. It prevails at some seasons of the year as an epidemic, attacking all the members of a family or families in succession, which has been the foundation of an opinion of its contagion. Therefore it may be con-

sidered one of the most interesting, and sometimes one of the most difficult diseases to manage. The young as well as the old and decrepid are attacked by it, and Doct Gross and other physicians have seen it in newborn infants. It occurs more frequently in persons of a deteriorated worn out constitution and predispositions, and is frequently preceded and accompanied by symptomatic fever. It may occur upon any part of the body, but the head, face, and legs are by far its most frequent situations, or more generally parts which are the most exposed to air. The face is its most frequent seat, and it attacks the right side much more frequently than the left, supervening in some particular constitutions or predispositions, upon

the slightest scratch or wound. When the disease attacks the face, the first evidence may be a slight redness at the tip of the nose, or a bright blush on any part of the cheek, thence the irruption spreads, and the swelling sometimes becomes so great, that the features cannot be distinguished, the cellular tissue of the eyelids, lips and cheeks readily admitting infiltration. In these cases the constitutional symptoms consist of general febrile irritation, sometimes inflamatory at others typhoid, and occasionally not markedly either the one or the other. Frequently there is considerable cephalalgia, sleepiness, and when the fever runs high, more or less delirium, and occasionally, positive meningitis.

When erysipelas attacks the hairy scalp, the redness is not so great,

in consequence of the inflamation being seated chiefly in the subcutaneous cellular tissue; but the part is exceedingly painful to the touch. Occasionally suppuration and even gangrene take place, portions of the scalp slough away, and deterioration of the pericranium ensues, leaving the bones exposed. In some rare instances the cellular membrane surrounding the parotid and cervical ganglions suppurates.

Erysipelas is divided into two varieties, the simple and the phlegmonous. The first or simple variety is seated exclusively in the dermoid tissue, and is characterized by diffused redness, with slight swelling, increased heat, and a tingling burning sensation. The skin looks of a bright crimson or deep cherry hue, the redness disappearing under pressure

but returning almost immediately after pressure is removed. There is no sense of throbbing in the part, as is felt in the phlegmonous inflamation. The burning sensation experienced in this disease doubtless depends upon its being allied with the tissue in which the nerves of touch spread out their extremities; and the absence of throbbing is easily accounted for, because the vessels engaged in the inflammation are so minute, that at the utmost extent of their expansion, they are too small to impart a sense of throbbing to the finger when applied to the part when the inflammation exists, or even to the feel of the patient himself. When the inflammation in this variety of erysipelas runs very high the cuticle puffs up into vesicles, which vary in size from a grain of mustard

to a large bean, and contain a serous fluid of a straw color and sometimes of a bloody appearance. These vesicles usually appear within the first forty eight hours, break in the course of one or two days, and are replaced by thin hard yellowish crusts, which subsequently become black; sometimes however after the vesicles break ulcerations supervene In mild cases of the disease the redness disappears on the third or fourth day, assumes a yellowish tinge, the swelling diminishes, the skin wrinkles and the epidermis is detached in small bran like scales.

This disease is not unfrequently erratic, leaving no other traces than a slight desquamation. The least contact with the part augments the irritation

There is generally a considerable degree of constitutional derangment accom

-paring cutaneous erysipelas; the tongue is coated; the pulse is quick and small; there is thirst, uneasy sensation about the praecordia, and a universal feeling of lan-guor and debility. The severity of these symp-toms is often disproportionate to the appa-rent extent and severity of the local inflammation, which is probably owing to the peculiarity of the tissue affected, namely its being that upon which the nerves of sensation are extensively dis-tributed.

In phlegmonous erysipelas besides the phenomena above described there is often very great swelling of the subcutaneous cellular texture, with infiltration of acrid and bloody serosity, suppuration or sloughing. This form of the disease is most

frequently seen about the eyelids and legs in old intemperate subjects and is usually attended by great constitutional disturbance: the affected part is exceedingly painful and the dermoid and cellular tissue often slough in large patches, the cellular coming away in dark cloudy dirty looking shreds resembling wet tow. This taking place the limb is left in a bad condition. If the patient should survive there is left hollow spaces frequently to a great extent between the integuments and the muscles

Causes of Erysipelas. Those persons who are liable to affections of the skin, to gout and who are subject to disorder of the stomach and bowels are very liable to be attacked by this

disease. It may be caused by the action of external agents, by all those that can induce erythema, as by irritating substances applied to the skin. Burns and scalds when to a certain degree are considered forms of erysipelas. However some repeated inflammations of the skin which are induced in this manner from erysipelas, which they affirm always depends upon constitutional causes. But whether a person be predisposed to erysipelas or not, there is no doubt, but they will have it induced by irritating agents. Hot agents applied to the skin, such as Canthaides and mustard not unfrequently induce the disease

Erysipelas frequently supervenes on wounds of the head, whether from accident or art, and when has been already

stated occurs more frequently on the head spontaneously, but slight constitutional disturbance being required in these cases for its development. The intemperate who are accustomed to the daily use of alcoholic potations, or who drink large quantities of porter or ale daily are especially liable to it. The slightest scratch of a pin or pointed instrument inducing in such persons erysipelas very difficult of cure.

Erysipelas prevails at times epidemically. It is seen in surgical wards of hospitals attacking almost every individual, causing the surgeon to avoid all operations that are not indispensably necessary, under fear that the wound may be attacked by it. In these cases the spread of the affection must be owing to the inmates of the ward being exposed to the same

influence, which caused in them the requisite predisposition. When once in the wards of a hospital, it is extremely difficult to get rid of; and it is the cause of much anxiety to all connected therewith

Treatment. In slight cases of erysipelas not much attention is needed in the administration of internal remedies, it may be sufficient to keep the patient at rest, to make him adopt the antiphlogistic regimen, and prescribe first an emetic, followed by saline cathartics, with which remedies practitioners not unfrequently conjoin, diaphoretics and the saline mixture. In the severer cases of erysipelas however more powerful remedies must be resorted to

Bleeding in the milder forms of the disease is now pretty generally

allowed to be as unnecessary as it is urgently required in the more severe forms. It has been rather a prevalent notion, that it is unnecessary to repeat bleeding as frequently in erysipelas as in other species of inflammatory diseases. We should be guided, however in this respect by the extent, and violence of the inflammation, the state of the pulse, the patients age, strength, and other important considerations. Like in other inflammatory diseases the patient should be bled just as often as the pulse indicates it. While some authors recomend bleeding as highly beneficial, others condemn it as decidedly injurious. It might be that both these opinions were right, as regards the practice of those who have thus treated erysipelas; because in the first instance, it may have been resorted

to under circumstances warranting its employment, while in the second it may have been resorted to when any consideration of the state of the system would have forbidden it. Where the system is highly excited, and more especially if any of the viscera become secondarily affected, the pulse have force and frequency, blood should be drawn, be the period of the disease or the age of the patient what they may; it must be remembered however that very old people, or very young children, will not bear the loss of the same quantity of blood at once, though they may its repetition, with advantage this the pulse and other symptoms will determine. There is nothing which will diminish the excitement of the system so promptly, or so efficiently, as the abstrac-

-tion of blood, whenever the disease is sudden in its appearance, rapid in its progress, and threatning in its aspect; for if the excitement of the system be not promptly diminished, the inflammation may speedily terminate in gangrene. Many think this reduction may be more safely, and as speedily effected by purging; but this is certainly a mistaken idea, though much reliance can be placed on this mode of evacuation, where the system is not highly irritated, nor the disease rapid in its progress

The propriety of leaching in erysipelas has been doubted by some authors, but again has been very highly recomended by others and on very just grounds. The leaches should be applied over the inflamed part, not around it, as advised by some. Because

the patient be young and vigorous, cannot be questioned, nor can the good effects of purging to a certain extent be doubted in aged and debilitated constitutions when the bowels are costive and very tardy. Under the first circumstances, the saline purgatives should be administered, but under the latter castor oil, or small but repeated doses of calomel when the stomach will not receive the oil, should be prefered. Calomel should also be given to very young children in preference to the saline purgatives, as the latter are very difficult to administer in any profitable quantity.— The utility of purgatives is most evident in cases in which the erysipelas attacks the face and head; as in these cases delirium is more certain to attend, than when the inflammation is located

on the body or extremities; and free dis-
-charges from the bowels, appear very constant-
-ly to relieve the brain, when in a state either
of congestion or inflammation

Doct Physick has strongly
recomended the aplication of blisters to
the affected part in this disease, and
they not unfrequently prove the means
of at once arresting the inflammation.
In these cases of tegumentary inflammation
a dilated and atonic condition of the
extreme vessels exists, which the stimulation
of the vesicatory is often successful in re-
-moving.

Mercurial ointment is another rem-
-edy which is highly recomended in cases
of Erysipelas; but from experiments tried
by some of the french authors, it has
been found that the good effects de-

pended solely upon the Lard, which pro-
-tects the part from the influence of the
atmosphere, and as there is great dan-
-ger of salivating with the mercury, the
simple Lard should be prefered in all
cases.

In the phlegmonous form of the
disease Mr Lawrence and others recomend
making free incisions through the infla-
med skin and the subjacent adipous
and cellular textures, which are the
seat of the disease, so as to completely
unload the overdistended vessels and
fibres, and to admit of the discharge
of any effused serum or purulent mat-
-ter. These incisions, are followed almost
instantaneously by relief and cessation
of the pain and tension; and this al-
-leviation of local suffering, is accom-

panied by a corresponding interruption of the inflammation, whether it be in the stage of effusion, or in the more advanced period of suppuration and sloughing. The incisions when made during the existance of active inflammation, are followed by profuse bleeding, both from arteries and veins, which probably has an important share in arresting the inflammatory action. The good effects, however, cannot wholly be ascribed to this cause, for it takes place even when there is very little loss of blood. The relief has been ascribed to the removal of the tension, which always exists in a greater or less degree; the edges of the wound usually gape and the surrounding skin not only looses its deep red colour, but soon becomes wrinkled on the surface;

two changes which readily explain the great and sudden benefit usually produced by the incisions.-

Punctures are used in the milder forms of erysipelas instead of incisions, and with marked benefit. When puncturing has been practised from the first appearance of the disease, suppuration rarely takes place. The number of punctures must vary according to the extent of the disease, there should be rarely under ten, and seldom exceeding fifty; the depth and extent of each puncture vary according to circumstance, being made deeper when the parts are more tumid, but more superficial when the tumefaction is not so great; they therefore should vary from two to four tenths of an inch

Among the topical remedies in erysipelas
the Tinctus of iodine holds a high rank,
and according to Mr Montgomery some
very remarkable cures have been effected,
by the application of this remedy alone.
It is a remedy now pretty generally resort-
-ed to in cases of this disease, and there
is great confidence placed in its effi-
-cacy. It is applied to the part inflamed,
with a camels hair pencil painting the
part, at first, with the tincture of its
full strength and diminishing it in
strength as the disease decreased in
severity

An Inaugural Dissertation
On Dysentery.

Subject to the examination
of the
Provost Regents
and
Faculty of Physic.
of the.

University of Maryland.

for the degree
of
Doctor of Medicine.
February 1845
by
Joseph. C. Hughes.
Washington County
Pennsylvania

Dysentery. As I have chosen this as the subject of my Thesis, and considering it a disease upon which there is not much diversity of opinion among the medical writers of the present day, a subject, which from my pen will not meet with any improvement. Though so far as my knowledge extends (practically or even theoretically it is but limited) but taking Eberle and others as my guide, I shall endeavour to do justice to the subject so far as in my power.

But before commencing a description of this disease, I might mention other diseases affecting the same tissue. For instance, we have Gastritis, an inflammation commencing in the mucous tissue of the stomach extending to and involveing the other

tissues composing that viscus. the urgent symptoms and sufferings in that region mark it out as being the seat of the disease.

Again we have mucous Enteritis an inflammation confined chiefly to that part of intestine called the duodenum. The bitter taste and jaundiced skin, together with diminished appetite point out the part inflamed.

This name is not only given to inflammation of the duodenum. but Nosologists have also applied it to inflammation of other portions of the Alimentary canal. The small intestines for instance. or they have even gone so far. as to give this name to the disease I am about to speak. But I shall not take it upon myself to say which of the names are most

applicable to the present disease. I suppose either would be proper. but what what I shall have to say when speaking of this particular inflammation, shall be under the title of dysentery.

Dysentery the subject of the present treatise affects more particularly and especially the large intestines as the colon and rectum: but inflammation has been found upon post mortem examinations to have extended throughout the small intestines.

The greatest pathological evidences are found in the large intestines as ulcerations, red patches protruding from the surrounding parts, the inner membrane thickened, also thickening of the muscular and peritoneal coats, and even gangrene of a portion of

the colon admitting the faeces into the cavity of the abdomen, to this may be added in some cases general inflammatory evidences and marks upon the peritoniaeum. When death ensues soon after the attack, in some cases, agreably to the report of Recamier, no other marks were found but a slight erysipelatous blush supposed to proceed from the presence of acrid and highly irritating fluids engendered within the intestinal canal. It were but reasonable to suppose that in these cases, some slight evidences of dysentery may have been present, but that death ensued from congestion upon some vital organ, diverted thereto by some undefineable cause.

The liver invariably suffers in this disease either structurally or functionally, and it is proper to add —

that all authors concur in the opinion of the universality of the latter.

Symptoms.

The symptoms will point out the seat of the disease. The loss of appetite, lassitude, nausea, disagreeable taste in the mouth, slight rigors, followed by fever, a hot and dry skin, great thirst, pain and load in the bowels, mucous or bloody discharges, or both combined, sometimes there is obstinate constipation and sometimes a diarrhoea, oft times there is nothing discharged but a — glary mucous, without the admixture of either faeces or blood.

The patient suffers from tenesmus, urgent repeated and ineffectual attempts by stool, to free himself of the intolerable load pressing upon the lower portion of the rectum.

After being exhausted with these painful and ineffectual efforts, in despair he throws himself upon his couch, and seeks for repose, but seeks in vain.

He is urged to a renewal of his efforts almost immediately with the same disheartening and discouraging results. This deplorable state of things continues until relieved by human skill, or by resolution, otherwise death closes his agonizing sufferings.

The pulse at first depressed becomes eventually hard to the feel, and finally frequent and small should the case have an unhappy issue, but full and soft if favourable. The tongue may have a dark fur in the centre, or a yellow fur at the posterior part when much bile is secreted, or it may be red. Shining and polished.

referable to atmosphere vicissitudes, and to the presence of miasmata.
Unripe fruits may produce a single case, but when it appears as an epidemic we must look for some other more extensive causes, long continued rains attended with cold and then succeeded by hot summer suns, constitute in the production of this disease, the chief causes. Humidity with cold will favour the centripetal direction of the fluids to the bowels, the continued heat following will greatly favour the production of that disease which the previous humidity had predisposed the system. The same causes too which would favour a momentum to the bowels, would also favour portal congestion, and therefore we cannot see the necessity of that nice distinction which it requires

At first it is usually covered with a white coat, which as the disease advances changes to a brown, with red edges and tip. The fever at first is usually remittant, but again there are cases that are Typhoid from the beginning. The skin in general is dry, but in Typhoid cases there is oftimes a clammy colliquative sweat. The discharges from the bowels at first evince no odor, and again in Typhoid cases where the diarhoea is colliquative — the faeces are offensive and acrid. In some cases there is incontrollable irritability of the stomach even ejecting remedies — intended to calm the disturbance of that organ

Causes. It usually appears in the form of an epidemic, in the hot summer months, and early in Autumn, Its presence in this form may be —

that where there is functional derang-
ement of the liver, and intermittant —
fever, there must be present in the atm-
osphere, Remo miasmata.

If an isolated
case produced by unripe fruits, or unwho-
lesome food will present functional and
even structural derangement of the liver
and no miasmata present, proves that
it is not necessary to the production of
all the phenomena manifest in this disease
or even those symptoms found in other dise-
ases usually referable to miasmatic influen-
ces: any cause which will favour the mo-
mentum from the surface to the bowels —
attended with or succeeded by the prostrating
and depressing influences of heat may prod-
uce this disease as an epidemic some modif-
ication of these causes will also change the
character of the epidemic, as for instance

where the symptoms are typhoid from the beginning and the scorbutic form, the production and result of cold and moisture conjoined.

Prognosis. A correct knowledge of the aetiology of the disease will aid us in making up our prognosis. If for instance we believe there is portal congestion, and also admit the connection between the portal and haemorrhoidal vessels, we can readily explain and account for the good results following bloody discharges, and can therefore augur favourably for the case. For to relieve portal congestion is an important step in the cure. Free discharges of blood relieve this, therefore this indication is answered - per vid naturalis. The discharges of mucous alone renders the case intractable and unmanageable and the prospect unfavourable; cold clammy colliquative sweats with a -

tympanitic condition of the bowels. with sanies and involuntary discharges are unpromising symptoms. As the state of the skin is an object of much solicitation. its persistance in heat and dryness are very unfriendly so also a uniform moisture of the whole surface is regarded as most favourable. the abatement of tormina and tenesmus. and tenderness of the abdomen. are hailed as harbingers of good.

Treatment. First to relieve urgent symptoms in medical parlance: what are the urgent symptoms: the first which appeals eloquently to our sympathies is the tormina and tenesmus. a most painfully harassing and debilitating circumstance in the case. Second inflammation of the mucous tissue of the bowels the reputed parent of the first. Third. the heat of the skin with resolute dryness. Fourth portal congestion.

The first and fourth demand the early exhibition of a large dose of. Sub muriate Hyd rargyri, followed by. Oleum Ricini. to which there is added from twenty to forty gtts of Tinc. of opium. to be repeated until free evacuations are procured from the bowels. If there be a bleeding pulse. that is. if the pulse be hard and corded it should be subdued by the lancet. and in connection use small and repeated doses of Tart of Ant in cold water or what is better. the mucilage of Gum Arabic or slippery elm. The more inflammatory symptoms being subdued, the secretion of the skin should next be attended to. To affect this. use the. Comp pul Ipecac. from 10 to 15 gr. with the pediluvium repeated at every exhibition of the powder. and the bowels are to be kept open by the exhibition of from 5 to 8 gr of Blue Mass followed by Oleum Ricini

and Tinc of opium. If this plan persisted in does not relieve the tormina and tenesmus, then recourse should be had to the hip bath with large doses of opium. The purgation should be kept up, because so soon as the bowels are relieved from the stimulus of medicines of a purgative character, the more distressing symptoms ~~which~~ will return which is infinitely more debilitating than free purgation itself. Then to secure this desirable result the best course would perhaps be to give the Mass Hyd. with the dovers powders every 8 hours, and intermediate to this Ol ricini and Tinc Opii. The liberal use of linseed or what is better, the mucilage of slippry elm as a constant drink. Among all the remedies used in the treatment of this disease opium stands first. For through its benign and salutary effect, we gain a triumph over the disease-

It relieves pain and lulls the system into repose. desidenata of the utmost importance in this, one of those most painful ills to which the flesh is heir.

Joseph. C. Hughes.

An

Inaugural Dissertation

on

Pleurisy.

Submitted to the examination

of the

Provost, Regents and Faculty of Physic

of the

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for the degree

of

M. D.

by

S. Kennedy Evings.

Baltimore February

1845.

Pleurisy.

Pleurisy may be defined "an inflammation of the serous membrane lining the cavity of the chest, and investing the organs therein contained."

It was thought by the older writers, that the pleura could never be inflamed, without an extension of the inflammation to the parenchymatous structure of the lung; but the observations of modern pathologists have proven, that, although inflaming of the pleura and the substance of the lung do frequently exist at the same time; nevertheless, there is not necessarily any connection between them. — And that inflammations of the lung and it investing membrane do exist often independently and separately of each other. In treating of this disease we will first endeavor to show some of the changes which are undergone by the pleura itself, which constitute some of the principal anatomical characteristics of the disease.

There are changes of texture and change in quantity and character of the exhalation. First, then, as re-

gards its change of texture. Upon this point writers have disagreed; some contending that the pleura itself was thickened, while others affirm, and with more correct ideas of the real state of affairs, that what has been supposed to be a thickening of the pleura is nothing more nor less than the superposition of layers of plastic lymph upon the inflamed pleura. This I suppose, and I think as do those writers who have had ample opportunity for forming correct ideas upon this point, to be the true condition of the part; for nothing appears more natural than that this superposition of plastic lymph has been mistaken by careless observers for actual thickening of the pleura itself. But we will not dwell upon this point. In the next place let us consider the effusions.

The effusion into the cavity of the chest constitutes the most interesting results of pleurisy. Now, the first effect of inflammation upon the exhalation of the pleura is to either suppress, or at least to con-

siderably diminish it, - but this diminution is followed in a short time by an increase in the quantity of the exhalation. The quantity of this exhalation varies much in different cases; - Sometimes not exceeding an ounce, - at other times amounting to several pints. First let us consider the effusion of lymph with a small quantity of serum. The serum being soon re-absorbed, the lymph is left, which has a natural disposition to pass to the solid state, and from thence we have the membranes formed, which in their organization, form, extent and consistence present much variety. As soon as this coagulable lymph is deposited it becomes solid. In the first instance it is a soft grayish white mass, having no appearance of life or organization; red spots or points soon appear, being at first very few in number, but quickly beginning to multiply, they present in a little time the appearance of reddish streaks or lines, having unequivocal characters of vascular canals, which passing beyond the lymph innocu-

late with the vessels of the true pleura, and thus a communication is at once established between the circulation of the false membrane and that of the general system. The extent of these false membranes is governed by the extent of the inflammation, and is also thought to depend on the previous habits of the patient. The false membrane varies in thickness from that of the pleura, when the lymph is apt to be overlooked, to that of an inch, when it can be separated into different laminæ. But to return to the effusion, which presents itself under various appearances, consisting of a colorless, transparent liquid, or of this liquid mingled with flocculi of lymph floating in it, or dissolved as it were, either affecting or not affecting its transparency, according as one or the other of these circumstances takes place. Again, it may be a greenish fluid made up of serum and pus in various quantities. Or, it may be pure pus. And, lastly it may be pure blood. These different effusions

are always devoid of smell, when there has existed no communication between the cavity of the chest and the external world.

What are the effects of this effusion into the thoracic cavity? The most general result is the removal of the lung from its proper position. For instance it may be suspended in the fluid, or it may be thrust back against the vertebral column, or it may be pressed both backwards and outwards against the surface of the ribs — But the effusion is sometimes so great as to force downwards the diaphragm, thereby displacing some of the abdominal viscera, the stomach, Spleen or liver. Again the heart may be displaced, being forced to the right of the sternum, when the effusion takes place on the left side, and vice versa.

Having thus endeavored to give a brief statement of the anatomical changes of the disease, we will now proceed to consider what effect these changes have upon the sounds of the healthy chest.

The first Physical sign which we have is the Friction Sound, which indicates that the exhalation has been arrested by the inflammation. This Sound is valuable in aiding us in our diagnosis when combined with the general symptoms, but since it does not last long, unless we see the patient in the earliest stage of the disease, we may not hear it at all. The next sign which presents itself, is the diminution of the respiratory murmur. When the effusion is very abundant from the first, we cannot hear this Sound, except along the vertebral column, and even then the Sound may be feeble, which results from nearly all the air being pressed from the lung, and its being thrust backwards; so that the chest can neither expand nor collapse; but, when the effusion has been gradual the respiratory murmur becomes by degrees fainter and fainter until it is finally lost altogether. But I should have mentioned that we find on percussion over the affected side dulness.

To the cessation of the respiratory murmur, we have

bronchial respiration succeeding, which would seem to depend upon the entrance of air into the bronchial tubes, now placed in a solid structure, which differs from their soft spongy medium essentially, and is better calculated to convey every change of sound, either of voice or of the entrance of air.

The voice is observed to have acquired a peculiar character. This from its resemblance to the cracked, tremulous, shrill voice of the goat has been termed "aegophony". It is but a modification of "bronchophony", and its return, after having once disappeared is thought to be a good sign of the decrease of the effusion; because, it is known to exist only when the effusion has arrived at a certain quantity and to cease when that quantity is increased or diminished. This sound therefore is not heard either in the early or the advanced stage of the inflammation. These, then, being the principal physical signs which are important in aiding us in forming a proper diagnosis, let us in the next place consider the general symptoms.

The disease is ushered in by high febrile excitement, generally preceded by rigors. The febrile symptoms of acute pleurisy are not of a uniform intensity. The most unequivocal sign is that of pain, and it is this symptom which attracts the patients attention, and gives to his countenance the expression of severe suffering. It is generally situated in the chest and occupies a spot on a level with the breast, or a little below it. This pain is said to be very acute, and to be aggravated by inspiration, coughing or pressure over the intercostal spaces. Why the pain is always situated at one particular point is a question which has never been satisfactorily answered. The best explanation of the matter is this:- that the chest presents at that particular point greater mobility than elsewhere. The pain is sometimes of a wandering character in the beginning of the disease, but it will become permanent in a few hours, though it may not become so until several days have elapsed. When the pain is inconstant and wandering, being unattended with

fever, we have reason to think that it is situated in the fibrous and muscular tissue; but this cannot be relied on.

The respiration is affected in the very outset of the inflammation, being of a hurried and nervous character and embarrassed. This depends upon the pain's being increased, upon a full inspiration being taken, and in order to avoid the augmentation of the pain, nature avoids taking a full breath. When effusion has taken place the dyspnœa depends upon another cause:- the mechanical obstruction to the expansion of the lung. which is in proportion to the quantity of the effusion. and the rapidity with which it has been exhaled.

Cough is another characteristic symptom. This may be either short and dry, or attended with a glairy and nearly colorless sputa. The cough is also stifled as much as possible in order to avoid the increase of pain which it occasions.

The position of the patient is various, and so much so, that a great diversity of opinion exists

among authors regarding it.

The patient assumes different positions at different periods of the disease, so long as the pain is acute the patient avoids lying upon the affected side, but when effusion has taken place the position is upon that side, in order to avoid the pressure of the liquid upon the healthy lung. But these positions are of very little practical importance. The pulse is remarkable for its hardness.

But there are still other signs which have not yet been spoken of. First, the change in the form and size of the chest. These changes result, as might be expected, from the effusions. The change of form of the affected side, consists in its becoming more rounded, and larger than the opposite side. The intercostal spaces are obliterated as it were, by being pressed up on a level with the ribs. This dilitation is more common in chronic than acute pleurisy. And there is still another sign, which is in direct opposition to the foregoing one, and which results from the absorp-

tion of the effused fluid, and the incapability of the lung to expand, in consequence of its being bound down by the false membranes. This being the case, it is evident that in proportion as the fluids are re-absorbed, the chest having no longer any support, must necessarily fall in: thence we have a narrowing of the affected side.

Causes are predisposing and exciting. Among the first may be said to be sanguine temperament, irritability of the system and weakened health from previous disease. Among the latter we have, cold, which is the most common, mechanical injuries.- such as the end of a fractured rib or a sharp cutting instrument coming in contact with the pleura,- extension of ulceration from a tubercle in the lung perforating the pleura.

Prognosis. Pleurisy is always a serious disease, although it often terminates favorably. We must consider in making a prognosis, the cause upon which the disease depends; the extent to which

the inflammation has gone,- the quantity and quality of the effusion, and the time which it has existed. and lastly to the disease which is likely to exist along with it. When we find it depending upon ulceration or gangrene of the lung, we may make an unfavorable Prognosis. Secondly, if we find double pleurisy, or effusion into both sides, we consider that more unfavorable than single pleurisy;- and when we think the whole cavity of the pleura to be inflamed, the prognosis is still to be unfavorable, or, at least, more so than when the inflammation is only prevalent on one side.

Treatment. There is no part in the whole human machine, in which inflammation demands a more decided plan of treatment than the pleura. When in the first stage, we find the febrile action high, attended with much pain, we must draw blood from a large orifice, until the pain is relieved or the patient sickens almost to fainting. If this should not afford decided relief, we

should bleed again in a short time, and repeat the operation at longer or shorter intervals as the urgency of the case demands, and the power of the patient to bear the loss of blood.
We will always find the blood buffed and cupped.
This bleeding may be both local and general.
Purgatives.— We may give in the first stage of pleurisy, saline cathartics, which are admirably suited to this disease; for they diminish the mass of circulating fluid by increasing the secretion of the intestinal canal. We follow up this treatment by the different preparations of antimony, tartar emetic, James' powder, dovers powder &c. in order to produce diaphoresis, and thus reduce the fever.
Sedatives.— may be given in order to quiet the irritation of the cough, and thus procure the repose of the affected organ. The best to be used are Hyoscyamus, conium, or the preparations of Opium.
The use of mercury is particularly advisable from its known power of checking the effusion of coagu-

labial lymph. It must be given in equal doses at regular intervals, and had better be combined with a small portion of opium. Our object should be to bring the system as speedily as possible under the mercurial influence. But the plan of treatment we have given is only applicable to the earlier stage of pleurisy. But it is frequently the case that we do not see the patient until several days have elapsed from the time of the attack, and the intensity of the inflammation has in a degree subsided and has assumed rather a sub-acute form. Still we are to expect advantage from blood lettings, since it has a tendency to check the further exhalation of fluid, - increase the power of absorption, and render the system more susceptible to the influence of medicines.

When the inflammation has nearly gone, and the acute pain given way to a mere soreness, and we have the physical sensation of soreness, we must change our treatment, and our main object should

be to promote the removal of the effusion.
We do this either by internal or external means.
The best internal means is the combination of
Calomel, Squills and digitalis, which will pro-
duce a speedy diuretic effect. In conjunction
with this remedy, we may use nitrate or acetate
of potash. If the patient is strong enough, we
may use with benefit a purgative, but it sel-
dom happens that such is the case.
Diaphoretic medicines are not of much use in
this stage of the disease.
Mercurial friction on the side may be used
in order to stimulate the absorbents.
Stimulating applications are sometimes used.

An
Inaugural Dissertation
on
Lactation

Submitted to the examination of
the
Provost, Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by
Francis Marion Mottu
of
Louisiana.

during
Session of 1844 & 5

Lactation

And the dangers which attend it.

A minute investigation into the mechanism and process of lactation were a task too arduous for our brain and too copious for our pages. We, therefore, propose to consider only so much of its Anatomy and Physiology as may be requisite for the recognition of certain accidents which occasionally occur during this period; a period so replete with interest and ingenious provision for every age and class and condition of animated nature.

Agony for the Mother and serious hazard of the existence of the child are the lamentable consequences of inattention and neglect of circumstances so earnestly indicating the necessity of much kind feeling and anxious regard. The elaboration of a fluid within the bosom of the Mother designed for the preservation

of her offspring, the encouragement of its growth and nurture of its strength is a process full of interest and beauty and lending much of both to every circumstance calculated to interrupt the regularity of its progress and decline.

The intimate sympathy which has been observed to exist between the Uterus and Mammæ satisfactorily explain much that else would be mysterious and inexplicable. The transfer of ailments from one to the other; the frequent circumstance of disease affecting both; and the alleviation of the disorders of the one by remedies applied immediately to the other, are facts with which obstetricians are rapidly acquiring familiarity.

The development of the Mammæ at puberty, is by no means the least interesting and beautiful of Nature's handiwork. A pair of diminutive promontories, normal tumors studding the bosom, swell into

"Breasts where Cupid trembling lies
Nor sleeps for kissing of his bed"

Then occur other changes not less conspicuous and important. The supervention of Menstruation is indicated by sympathetic alteration of sensation and appearance to the mammæ. They become turnid and are constantly painful. These together with the secretion of a thin, serous fluid somewhat resembling milk, characterize an affection which has been demonstrated denominated Spurious pregnancy, differing from the real only in the absence of the areola.

The quantity of milky serum secreted by the breasts during the period of uterine gestation differs materially in different subjects and at different periods. Sometimes we have it appearing as early as the fifth month, often much later, and not rarely altogether absent until after delivery.

The proper period at which to present the child to the breast has ever been a topic of obstinate dissension among obstetricians

but

but by the most experienced and those of acknowledged success, are advised to permit the contact of the child's mouth within the first twenty four hours of its extra-uterine existence, for by such means the nipple is softened and drawn out and the flow of milk encouraged. With first children the secretion is less abundant than at any subsequent pregnancy, at least for the first three or four days. On or about the fifth day, striking changes occur in the sensation, consistence and conformation of the breasts. They are then found to be hard, tumid & often exquisitely painful. The temperature of the patient's skin becomes somewhat exalted, her pulse is accelerated, distressing dreams harrass her rest and waking, her intellectual faculties are constantly disturbed. Glandular swellings are observed in the mamma, extending even to the axilla in the form of knotted tumors resembling the successive links of a chain, and these exhibit much tenderness on pressure.

Milk

Milk in small quantity oozes from the breast nipple when the breast is subjected to pressure or fomentation. Much pain attends the first application of the child, but the abstraction of milk is followed by much relief. With the relief of the over-laden breasts we have the complete dissipation of all alarming or unpleasant symptoms. The natural temperature of the skin is restored, pulsation is retarded, thirst abated and mental derangement removed. And thus is the natural process of lactation fully established.

Until this termination is induced, the patient is harassed with constant pain, and various annoyances beset her. For these, relief must be sought from such remedial measures as existing contingencies may suggest. A hydragogue cathartic will prove beneficial, to be repeated in twenty four hours should the first prove ineffectual.

Aggravation distension of the breasts

is a frequent consequence of the intemperate Employment of liquids for the alleviation of the distressing thirst which usually exists. Recourse may be had to saline draughts frequently repeated for the mitigation of this annoying symptom.

The difficulty which the infant experiences in drawing out the nipple of a hard and tumid breast, has suggested the propriety of employing artificial means for its assistance. Thus, breast-pumps are used, and the milk evacuated by an ordinary breast cup and syringe. In fact any agency by which a vacuum may be effected here may be employed with advantage, and the mouth of an older child or grown person, is perhaps the most procurable, applicable and effectual.

Fomentations with hot water and the application of mild poultices to promote the escape of milk and relieve distension may be resorted to with advantage.

Copious perspiration may be induced by the application of oiled silk both breasts, and this treatment has been highly commended.

The

The disastrous consequences which must ensue to the child from the retention of meconium in the large intestines have been wisely anticipated and avoided by a provision of nature. Cathartic properties have been given to the first draughts of milk for the purpose of evacuating it. And should this by any accident, be withheld from the child, the necessity of the administration of a gentle purgative becomes urgent. And to children raised by wet-nurse or by hand disregard of this precept is fraught with danger; obstinate diarrhea and alarming convulsions being the almost inevitable consequences of such neglect. The administration of purgatives under all circumstances, however, is most injudicious, for Dr. Robt Lee has demonstrated the existence of a quantity of nutritious albumen in the intestines above the situation of the meconium, serving for the sustenance of the child till lactation is established. Should this be evacuated, recourse must be had to artificial nutriment, and such measures are to be avoided.

Much variety in the appearance and quality of the milk occurs during the period of lactation in all mammiferous animals. Thick yellowish and creamy at first, it assumes after the lapse of a few days its natural character, becoming thin, bluish and sweet. But these appearances are rarely constant and there are many circumstances constantly contributing to vary them. Intemperance or diversity of diet, irregularities of temperature, neglect of proper exercise and mental emotions, and more particularly, perhaps, the frequency with which the breasts are drawn, contribute materially to derange the secretion, and such derangements seriously affect the health of the child.

The liability of the child to be affected by the sentiment of the nurse, has been taken up by Practitioners, and turned most ingeniously to account. Medicines have been thus administered; purgatives taken by the nurse have acted energetically upon

upon the child, and this should be remembered:—
acidity in the child's stomach has been neutralized
by alkalies taken by the nurse, and the ravages of
hereditary syphilis have been antagonized by mercury
similarly administered.

An unnatural taste is frequently observed
in Milk. It is sometimes distinctly saline and
children are not rarely observed to reject the
breast, disgusted with the bitterness of its contents.
Children are frequently disagreeably affected by excessive
richness of their nutriment, which without other
appreciable change, may acquire this quality
from irregularities of diet or habit in the nurse.
This may be remedied by purgation, exercise
sufficiently active and the adoption of a spare
diet. It is not uncommon for the milk to
acquire a perceptible tinge of green or black.
Dr. Locock speaks of four instances in which he
has observed a bright yellow colour, as of pure
~~pure~~ bile in the milk, occurring without the

presence

presence of Jaundice and harassing the child with gripe and diarrhea. This disappeared under the administration of mercurial purgatives.

The influence of Lactation upon Menstruation and Pregnancy and vice versa, has been a topic of much discussion. That impregnation has been frequently affected in suckling women is proved by the observation of Mr. Robertson, who observed this occurrence in eighty one out of 160 cases; and the appearance of the catamenia is a frequent plea of wet-nurses, who would urge their claims to preference, "believing that their milk is thereby renewed and rendered fit for much younger children". This Error though current with them is no less an Error. The quality of the milk is seriously impaired, Exciting vomiting in the child "and frequent watery motions of a Spinach green colour.

A constant source of discomfort to the nurse during the period of Lactation is to be found in Sore Nipples. These instead of

retaining

retaining that tenderness and delicacy which they
possess originally, should acquire a callous texture
a semi-insensibility. And to induce this desirable
condition, application of gently astringent or stimulating
lotions will be found advantageous - Green tea, for
instance, or weak solutions of the sulphate of Zinc
or Alum. Where the soreness is more than usually
severe or persistent, advantage may be derived
from pencilling the nipples with a solution of
two grains of Nit Argenti in an ounce of rose water;
should excoriation ensue, a shield of wood, ivory
glass or glass or silver must be employed with
an artificial or prepared covering for the child
to suck through. This will effectually protect
the nipple. The parts should be touched occasionally
with lunar caustic, and dressings of simple
ointment employed. Preparations of lead or
Mercury should be avoided, lest the child
should swallow them. When without being excoriated,
the nipples are hot and dry, stimulating applications
are

are forbidden, and in their place dressings of simple ointments, powdered gum arabic and bread and milk poultice are beneficial. Protection from the draft by means of shields provided for the purpose, is in all cases required.

Mammary abscess, by no means a rare accident and even productive of much constitutional disturbance, is the natural consequence of inflammation attacking the breast during the period of lactation. When this has not been signalled by leeches, poultices and fomentations, the means by which serene attacks are successfully repulsed. Should the abscess be extensive and implicating any considerable portion of the breast, seriously interfering with the function; the duty of the Surgeon (for this is comprised within his province) is obvious; to let the matter be evacuated by the knife, freely and unhesitatingly. In less alarming cases it is customary to prevent the distension of the breast by evacuating its milk

artificially or by the child's mouth, but this treatment is only justifiable where the inflamed portion is confined within narrow limits; the pain and irritation that attend it forbid its employment in more serious cases.

Should there be much hardness and distention of the breast, relief will be afforded by the frequent removal of a small quantity of milk, and friction with warm oil. Let the diet be low, and the bowels be kept open by saline purgatives. The latter precept is important, for its neglect has been followed by much distress to the patient, even where the dispersion of the ~~tumor~~ milk has been as gradual as the weaning of the child. Depression of spirits, general debility, loss of appetite and a sensation of weight and lassitude are the usual consequences of the omission of these cathartic medicines, and these symptoms rarely fail to disappear with the re-adoption of the remedy.

Defective organization of the nipple

and loss of elasticity and power of retention in the lactiferous tubes may give rise to appearances that seem to indicate a superabundance of secretion. A wasteful drain upon the system is maintained by a constant trickling from the nipple in the intervals of suckling. Health and strength are thus unimpaired and the necessity of checking the inundation is obvious. For this purpose astringents have been employed, but there is risk of their effecting too much and entirely dispersing the secretion. The internal administration of astringent tonics - kino and alum and mineral acids may prove beneficial; but in most cases recourse must eventually be had to weaning and the total repulsion of the milk.

The influence of protracted lactation upon the mother and the infant is a subject of much interest and one that has given rise to much able discussion.

Various diseases to which children

are

are liable - and, more particularly, Hydrocephalus - have been ascribed to premature dentition in weaning the child; but this is an error: for by careful observation it has been demonstrated that the occurrence of such disorders is as frequent with Children who have been brought up by hand, as with those who are nurtured at the breast.

The natural excitement which attends the onset of lactation is liable to aggravation of an alarming character by certain familiar causes. Mental emotions, physical exertions, heated atmosphere and stimulating diet, tend constantly to fan the healthy excitement into a blaze. and the symptoms by which this result is indicated, when taken collectively, have been denominated Milk fever. Here we have febrile symptoms more severe than the healthy glow which characterizes the period in its infancy, and the precursory rigor is distinctly defined; pain in the head and throbbing; full, hard and rapid pulse,

distending

distressing thirst, flushed countenance, hot and dry skin and furred tongue, are all present, harassing the poor sufferer and demanding the interference of the medicine.

Gentle encouragement to the flow of milk; careful correction of errors of diet, temperature and ~~diet~~ exercise; tender allayment of mental agitation; and withal, purgatives and diaphoretics, will effectually insure the remission, if not the entire removal of all distressing symptoms. A common result of injudicious management in such cases is violent phrenitis accompanied by total suppression of the secretion of milk and demanding relief from the lancet.

Circumstances frequently require the artificial dispensing of the ~~secretion of~~ milk. Perhaps the child is to be weaned, or from constitutional debility or local defect, the mother may be unable or unwilling to suckle it. Then it becomes necessary to <u>suckle the milk</u>, as the

process

process is vulgarly termed, and to do this properly, some patience is required from the patient and some practice from the practitioner. The application of cold, evaporating lotions has been recommended, but these are liable to produce fever and phrenitis by the sudden dispersion of the milk that they tend to effect. Dr. Locock professes to have been well satisfied with the administration of stimulating liniments, applied warm and also constantly by means of layers of lint or flannel.

"In savage nations" says Dr. Locock "in many parts of america, the East and the polar regions, it is the custom for mothers to suckle their infants for two years at least", and without any such disastrous consequences as have been ascribed to the practice.

Numerous instances of protracted lactation are recorded. We are told of women whose period of lactation expired only with the possession of a breast: and others, more

reasonably, who continued to suckle three or four or five children in succession. Such inexhaustible powers could have been constructed for no other purpose than to fill the craving maws of all the motherless sucklings in creation.

In speaking of the process of Lactation we have described it as the exclusive property of women who have known the pangs and pleasures of conception; but men have played the wet-nurse in their time and with a prodigality of milk.

"Almost beyond the privilege of Woman"! Virgins and dilapidated beldames have suckled babes, and suckling babes have held within their breasts the means to suckle others.

An

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by W. Hobbs of Ind. Co.

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Elements of Diagnosis

Diagnosis is one of the most interesting as well as one of the most complex departments of medical science. It presupposes a knowledge of Physiology and defines those minute shades of difference in disease which so often arise from the artificial customs of civilization: nor is its sphere thus limited to the hidden and obscure, for disease often throws aside her impenitrable and stands forth in her most hideous aspect, to call the sufferer to the silent shades of death; and to bid defiance to the accumulated wisdom of ages. Neither is it confined to disease alone, for every Zephyr which kisses the cheek of beauty, every emotion of exhaltation and triumph, every sigh of greif and pain, are signals which may guide us to mans mental moral or physical condition. How vast; how comprehensive; how sublime; then is this subject, when nature yields to her hidden laws and medical science with all its diversity and infinity is only the basis upon which it reposes

But let us turn our thoughts for a moment, from this subject to medical history; which teaches how the mind of man gradually emerged from the dark cloud of superstition which overshadowed it into the broad sunshine of philosophy and truth; let us learn the progress of disease as it passed from generation to generation and from age to age through the lapse of time, gathering new mysteries and discovering new lights, which the gifted sons of genius had again and again failed to reveal. Let us apply these facts (collected from the pioneers of medical science), to diagnosis, for they will often aid us in our difficult task more efficiently than the hypothetical speculations of later observers. It is obvious from the preceding remarks that we understand by medical history not an assemblage of dates but the "lex scripta" of medical science: which teaches us directly or

indirectly, partially, or fully the eitiology, pathology symtomatology and the modus medendi of disease. Eitiology which it generally first discovers, points out the proper prophylactic course to be pursued, and to a certain extent directs the method of cure. Having now explained the results of eitiology we will proceed (after making a few abstract remarks on causation) to determine as far as possible the relations existing between this first principle and diagnosis.— A cause is any event preceding a series of events which follow each other in a regular chain of sequence: hence the best method of their classification is the order in which they occur. The last event in this series is the most important and has been called the effect or proximate cause of disease, because all other events are remote or antecedent to it. Now each of the causes, pointed

out are either, concentric or, eccentric; and this which is truly predicated of a genus can also be predicated of the species. The first two causes of the series which we shall notice are, chemical and mechanical, which are internal or external. Chemical causes from their known effects upon matter often give us direct and immediate knowledge of the disease which we are investigating, and thus become important elements in medical diagnosis. Mechanical causes the second variety named, are often the subjects of surgical diagnosis and they determine the extent of any solution of continuity which could not otherwise be ascertained. Individual inherent, or hereditary causes are sometimes necessary in doubtful cases to discover, the peculiar nature of morbid changes which are taking place: for phthisis which originates from an inherent

individual cause is said to be present or absent in obscure cases, from the existance or nonexistance, of evidence to prove hereditary transmition. Epidemic, endemic, and contagious causes are the last of the series which we shall mention, for symtomatology which is the essential part of diagnosis will require much of our attention. The causes last referred to, points out (to a greater or less extent) when connected with symtomatology, the nature of disease, with its "modus menendi". Symtomatology is a compound principle of diagnosis, for it is derived from the literary history of medicine and the history of the patient. In the first place, we should in a given case of disease, mark the symtoms as the occured in regular chain of sequence: so that their cause or causes may be understood with facility.

We likewise in symtomatology observe, independent of this invariability of sequence, the connection existing, between the power, which is active in causation, and the effects which are passive; because we can better understand the efficiency of the agent when such connection is noted. These are the essential points of symtomatology, when it is legimately considered: but their yet remains another variety of morbid existances, which occur in the progress of disease, which I call to distinguish them from symtoms of necessary connection, consociate actions. This distinction appears to me important: because consociate actions are morbid changes, which have no invariable connection with disease proper, and are therfore incidental or accidental, sequences of a primary cause; the peculiar action of which depends upon the affectability of certain organs in which there exists a proclivity to disease. I may remark likewise before I proceed to discuss the subject of symtomatology,

proper; that these accidental sequences of disease, when known constitute general diagnosis: and that process of thought which traces them to a primary morbid change is special diagnosis. Now all diagnosis, derived from symptomatology (which we are considering), is either certain or uncertain; because, it either reposes upon the doctrine of probabilities; or upon absolute and indisputable truth. Positive knowledge of disease is derived from signs, which are in such close relation with disease, that they cannot be seperated from it; and, without it, would not exist; hence they have been called characteristic, or essential, such are the acute pain in the side, dyspnoea and dry cough in pleurisy. These signs should be in sufficient number, and in accordance with each other, to establish decisively the diagnosis of disease. Common or general diagnosis is

said to be a distinction between the elements and principles of disease; and like special diagnosis it has for its basis semiology and symtomalology. Thus we find, that special diagnosis is a part of special pathology and should be aided by an accurate and practical nosological arrangement. When we distinguish two diseases which resemble each other, such distinction, has been called absurdly a differential diagnosis: just as if every diagnosis was not differential. There is no small laxity of dialectics in the observations of writers on semiology and diagnosis, and these subjects, evidently owe much of their refined mysticism to this cause. This remark may appear to be uncalled for (by the initiated) but as a student and tyro, we accuse that writers have left us in the dark; because

one insists positively upon the difference which exists between the signs and symtoms of disease, and another uses in his work these words as, identical, or as having the same import. Should we be called upon to make the distinction, we would say that every isolated effect, or change occurring in the human body, in a diseased state, and which is either objectively or subjectively ascertained is a symtom of that state or change; and that this symtom is a sign of disease when it leads us to appreciate the meaning of other phenomena, or in other words, gives us a knowledge of what they signify. These symtoms and signs as we have before hinted are the necessary consequences of disease; and that effect or morbid change which occurs last in the series is consicuously

Dr Rush and others as the disease par ex-
cellence. We will not digress to discuss this point,
because it is to apt to lead the investigator
into the abstract fields of imagination dealing
with etherial essences, real forms, and actual
existances which have led away the minds
of medical philosophers without so far as I
know leading to any practical and important
result. The physical condition of the patient should
not be neglected whilst treating of the signs of
disease, for any alteration in the usual size strength
density and consistence of any organ or organs may
signify diseased action. First we observe the skin:
to ascertain its natural colour, its excess, or diminished
excretion, its natural or unnatural elasticity and
density, its lesions, with their phenomena, and
all other signs which are connected with its
departure from a previous state of health

Having refered these indications to their proper cause or causes, we looke next to the tissue with which A it is said to be identical; which is the mucous membrane of the mouth. Now this was looked upon as a certain indication of the condition of the digestive tube, and analogy would surely justify the conclusion, but experience which is the experimentum crucem of knowledge A has I belive decided otherwise. The state of the muscular system is another source of diagnosis, which when connected with the habitudes of the patient may guide us in determining the tonic or atonic condition of the organs of sustentation. We likewise note the relations, size, and force A of the heart as part of this subject, because disease may thus be revealed which would otherwise escape our notice. Sometimes also the colour of the hair and eyes, the prominence of forehead, the size and protusion of the lips, the length or shortness of the neck, the flatness or

rotundity of the chest are considered as signs or evidences of disease which has been, transmitted, Physical signs as they have been called: (because they depend upon physical science) are the most certain evidences of internal morbid or pathological changes. Semeiology has also another series of distinct signs, which depend upon accoustic and hydraulic science alone: hence the evidences are to a certain extent indisputable, and the disease, with which they are connected comparatively speaking is easy to diagnose. These signs import, either structural change or functional disorder: and here also we learn from the patient the period of time which has elapsed since the onset of the malady, for we can thus, render the pathology easy: from the knowledge derived from this source, because it teaches us the stage of the affection.

We should receive with great caution the facts which are said to exist by the patient, for either from inherent stupidity, or mental imbecilitude, produced by disease, the patient is very often incapable of performing his part in the description of the malady. Again I should take with still greater caution any symtom elicited from the patient, when questioned upon the existance or nonexistance of such symtom. Indeed if we belive half of the patients story, we must continually, be prepared for misconception and positive untruth, for in many instances persons, whose moral code in other matters is unexceptionable, are indisposed to give a correct account in a state of disease as to their present condition and feeling. With a knowledge of all these difficulties we should ask again and again the same questions; from

day to day, because we can thus detect error, and elicit truth which at first we may have failed to discern. Again, if it is in our power we should always select that period of time in the disease, in which from the absence pain the patient is comparatively calm and placid. It is necessary to note many other circumstances connected with this part of the subject, but they are passed over in silence, because pathology which is an important element in diagnosis claims more deservedly our attention. When this department of medical science assumes a distinct form, its followers, looked anxiously for the revelation of many diseases which had hitherto, been the subjects of endless speculation: nor were they disappointed, for many of the brightest gems which deck Medical science are the rewards gathered from its fields, while rich

in promise, Indeed we owe nearly all our knowledge, of certain affections, (which before were justly said to be the reproaches, of the medical art) to pathological investigations. Let us, then hope that medical science, will soon throw off the shackels which encompass her, and present to the world not an art void of certainty, but one clothed with all the beauties and attributes of truth; one which will not imbrace within its sacred walls alike, the designing charlatan, and and the noble wosshipper of truth; one which will in the hour of need forsake us not, but guide us to all our, hopes,; all our anxious desires,; all our most fervent wishes;) The alleviation of pain and the restoration to health of our fellowmen, Is pathology about to bring disease wholy under the comptrol of medicine? Is the prediction of Rush about be fulfilled? Oh; would to God that

science may thus triumph over disease and that rational medicine with all its nobleness, beauty and grandure may sway the minds of men in all their investigations; for it is to this, school of medical philosophers, that hope ever bids us look for new conquests, new victories over disease which has laid low in dust its countless thousands, with all their intelligence wealth, and greatness. But let us turn our minds more directly to pathology, which is now the basis of rational medicine; let us note its connections with diagnosis; and observe how it points to the successful treatment of disease: let us listen to its voice, when man's heart touched with grief and pain calls us to aid him, in his distress; for if we lay aside this the sheet-anchor of our hopes, all is lost, and science weeps over its fall and degredation

It is true that a certain number of medical men still call disease a collection of symptoms, and guided by this false philosophy they treat with great assiduity these manifestations of disease. Thus a patient has headache; the symptomatic man orders Leeches: because he calls it disease, and because he once or twice, has seen cured it before from their direct application to the temples: now he orders this medicine, and now that, as one after the other fails, untill at last perhaps he by accident or good luck hits upon the right thing, which may be the reverse of that first tried. Now if we follow pathology in our diagnosis this random shooting is avoided, for the symptoms above named would by it be referred to their proper causes, and the medicine necessary to counteract this cause given without danger to the patient, and with credit to the Dr

In no affections of the human body is this pathological knowledge more important than in diseases of the nervous system. Epilepsy with its strange features, Hysteria with its unique symtoms, Mania with its deplorable and heart-rending shrieks, are alone diagnosed and treated correctly, when their pathology is duly considered. I once knew a girl who had epilepsy for 8 years, who had been bled for 6 without relief; strange perversion of reason followed this course of treatment, for if she had been left alone such could not have been the issue of the case. Here was beautiful experience bleeding a comparatively bloodless girl to cure her, of a disease which was found to be seated in the spine, and which from the condition system demanded tonics, with proper local treatment. When I first saw her I was ordered as a student to bleed her, because Dr always bled her

this I refused to do, because by doing as Dr had done I thought that I was only drawing her one step nearer to the grave. After this she was not blex nor had she another attack for 9 months, and when then it was comparatively slight.
This will illustrate the importance of pathology to diagnosis, and to the treatment of disease.
We can study disease and treat it, either empirically or pathologically; the first takes together all medicines which have been used since the days of Adam, and pokes one after another down the throat of the patient until he is a walking doctor shop; the other guided by reason seeks for and finds the disease which exists and then rationally and efficiently cures the patient, without striking like a blind man in the dark. We find also that in febrile diseases, no efficient treatment or diagnosis

can be made out without a constant reference to special pathology. General pathology which embraces the elements of disease is likewise considered in every scientific diagnosis. Having acquired a knowledge of this, the last mentioned department of medical science we observe the presence or absence of certain elements in any given case, which will determine the name and nature of the disease, which is before us. Thus in pericarditis, inflamation, fibrinous transudation or exhalation, with adhesion, and partial transformation are elements which leave no doubt, in our minds (when present) that the disease which we suspected during life was inflamatory, and that this inflamation was located in a fibrous tissue. We are taught by general pathology that every organization has certain and fixed laws which are invaded by every disease, the general features of disease are in all its affections similar, and it is the province

of this pathology to note these similitudes. Inflamation as an element of this general pathology will illustrate this point: thus all inflamations are essentially composed of "increased flow of blood to a part, with motion through the part, partly increased and partly diminished and all have certain sequences which follow each other either regularly or irregularly during its progress If then these indications which are general, are present we diagnose this morbid condition, and these combined with the signs derived from special diagnosis, which are pointed out by special pathology, form the whole task of the physician. But also these special indications should have certain relations to each other, for this would render them more important and certain as diagnostic criteria. Many writers confine pathology to a bald detail of anatomical lesions, but it appears to me that such restrictions are

injurious to the advancement of useful knowledge, for it should be connected with the signs which are present during life; and thus we can look with certainty for certain changes after death. If we notice the discoveries made by this class of the profession we find that no assiduity ever compensated for the neglect of this precept, which has been followed more strictly by the French than any other nation. Look at English pathology: it is chiefly composed of the enumeration of a vast number of morbid anatomical changes, and notice scarcely is taken of the signs accompanying the disease with which they were related. Sir B. Brodie although he has not professedly written on the pathology of articular diseases is still a noble specimen of a special pathologist, and as far as I know deserves to be imitated more [more than any other writer in Britain]

Indeed guided by pathology in diagnosis, we will not fail, either to detect the incurability of disease, or its capacity of being radically cured by a correct and judicious use of the means which God has put into our hands, for the alleviation of pain, and sickness. Dr Williams in his Principles of Medicine has eloquently presented to the profession the claims of pathology: and has included under this head, the symtomatology Nosology Semiology, Deimiotics, Etiology and the primary elements of functional changes or disorders, with the structural lesions of disease. We also find included Diagnoses, Prognosis and Hygeienics. As these principles have been noticed before we will make one remark and then pass on to the modus, medendi of disease, which we have incidently remarked was an element of diagnosis. From the close connection which exists between the art of curing disease and other parts

of this sugect it is evident, that any attempt to separate them in toto, would only confuse and render the subject complem and difficult The modus medendi then which has been before referred to must be connected with all the other elements which go to form the diagnosis of disease First then we find it connected necessisarially with Eitiolgy; because when a remedial agent is used in the treatment of disease, we must decide how far such agent caused the elimination of certain signs, which are to guide our after treatment Again, we notice the effects of remedies not only for this but for other purposes; for oten from accidental occurrences the disease is intentionally rendered more intense so that its nature may be distinctly understood. This should, if it does not involve a question of concience and this means of diagnosis should not be

used unless from sheer necessity, Blood letting is one of the agents which is sometimes resorted to for this purpose. Thus a patient has a fever which from its obscure nature, cannot be said to be inflamatory or congestive, the physician lets in total darkness, unsheaths his lancet and thus determines the nature of the disease Nor is this the only instance of purely empirical practice; observe the whole nosology, every disease which is there recorded, under peculiar circumstances may be treated in the same way, for the same purpose. It is true that this remark is humiliating to the followers of the medical profession, but it is as true as it is humiliating. It is easy in theory to diagnose and cure every disease, but when called upon to act, this beautiful fabric melts like the mist of the morning, before the rising sun,

This empirical method is oftener used in certain epidemics, than at any other time. One instance may be used to prove this (of the thousands which exist); which is the treatment of the Epidemic Asiatic Cholera, as it recently prevailed throughout the U. States and other countries: How rapid was this disease in its march; and how various and inefficient was medical treatment; in its subjugation, The Yellow fever, of Philadelphia in 93, 97, 98, is another instance of the truth, of this assertion, Is this the modus medendi of disease is rendered more certain by diagnosis and pathology, it will not maintain that connection which it now has to this subject, for it is the imperfection of science which renders it necessary, as a constituent of diagnosis The modus medendi, of disease is the winding up of all medical study, and we will make it the

the winding up of this essay, We can now see more distinctly the beauty of this the last and most important part of the physicians duty, He is in this capacity, the philosopher of nature, the worshipper of truth, and the guardian angel of mankind. Others may indulge in the petty disputes of the world, and struggle for wealth, with its importance; but the Physician if he be a true son of Aesculapius thinks of the happiness which he has enjoyed and is still conferring on the human race, He meditates upon the past, and hears in the nightwinds howl the last groan of the departed spirit, which he has in vain attempted to unite with its clayey tenement He sees death in all its forms, he looks upon man not in the days of his strength and pride, but when he is the humbled victim of disease. Let the men of world call our profession degraded and let them too forget to call to the physician for help

when disease and death is abroad in the land
Such are the scenes which the physician is called
upon to behold, such are the subjects of his
contemplation, such are the elements upon which
he bases his decession, which in the hour of distress
"wings its way to the minds of his hearers for good
or for evil", and is caught up by the sufferer with
increased feeling and emotion. Contemplate for a
moment such a scene; look upon the silent groups as
the smiles of joy or the tears of grief alternately
sway! Behold the physician, as he stands, calm and
collected unfolding those mysteries which no one but
himself sees and understands, his sagacity his
memory, with every faculty of the mind is active,
not a particle of evidence remains unconsidered,
but all the vast field of medicine is past over
in rapid review; and his judgement is at last
declared, which is the diagnosis of disease,

This must be given for men begin to have crude notions of medicine, who are not of the profession and their penetrating questions as they suppose them will again and again be asked untile they are answered. Then every body must know what ails Mr A or B and the question, of "whats the matter" is incessantly ringing in his ears. Again diagnosis if given in a faltering and hesitating voice, is said to be by the women (Lord love 'em) a quack's opinion, and they the yth daughters of their mothers undertake in trice to cure the disease. Well as I recollect an accident which happened to a case under my care caused by one of the above named dames. A little girl, had about 5 miles from Frederick a coffee-pot upset in her face from a high stove, which passing down left not a particle of cuticle on her superior and inferior extremities the rest of her body was unaccountably untouched except her face. I gave her an anodyne, and

immediately used the only remedy of which I was master, which was castor oil; this was applied locally with colon, and after the dressing the child fell into a sweet and refreshing sleep. I left the house and soon after an old lady, the doctress of the neighbourhood entered, undressed the wound and applied her "cure all ointment", which was the Sulphate of copper and lard. This was enough for the child dies from gangrene, induced by this sovereign remedy, and she said of course that the Dr killed it with his "stuff". Thus we find this privaliged class of practitioners, continually contradicting our diagnosis and reversing our treatment, with perfect confidence and nonchalance. Let us then if we want to gain confidence and skill in disease rest our hopes upon pathology for this is the author of a correct diagnosis prognosis and treatment. Thus we have passed over the circumstances which attend diagnosis, its elements

or principles, and the connection between these principles with their legitimate relations to pathology. We have found that every part of medical science is subject to diagnosis and that these parts with their elements have certain relations to each other. This natural chain has been followed out in this essay without that clearness which we hoped to attain, nor could we express in words in a forcible manner the ideas we wished to convey, for time would not allow us to be very nice in our style of composition. With these excuses and youth on our side we beg to be excused, for if we are rejected we promise a better Thesis. So now with a few more remarks we will bid adieu to this subject until we meet it again in a green place, which is the students dread. First, we remark, that psychological knowledge is important in diagnosis, because we are taught more in this part of philosophy the art of reasoning more than in any other; diagnosis when correct

reposes upon a correct train of thought: therefore as it it thus reposes, it is dependent on psycology, because it teaches us a correct manner, of thinking. Physiology is intimately connected with diagnosis, psycology is related to physiology and thus it is likewise connected in this way to diagnosis. This psyco-phijiological view of diagnosis is often followed in many diseases of the brain and nervous system; but from its complexity and extent in cannot be discussed in this essay. M. Halls, theory of reflexed nervous action is beautiful, and it is this theory which elucidates many diseases which had not been before understood; it is then to this meaphysico-physiological theory that a correct diagnosis is opened, which illustrates the the assertion before made, Whether this abstract method of thought will or will not elucide this subject, father, I know not, but, I do know that Germans have

have excelled in physiological investigations, and that they are celebrated for their metaphysical acumen. We will now dismiss this subject and in conclusion remark, that diagnosis should be the first and last study of the medical philosopher: for by this and this, alone can he gain and maintain his position before the world and the medical faculty, which he is anxious to do, With this belief we would be recreant to the profession which we have chosen, and unjust to our fellow men, did we not strive to perfect ourselves in this branch of the medical art, Our task is now completed, and we will add Knowledge to Knowledge, wisdom, to wisdom until our "alma mater will not look with disdain upon one of her humblest sons,

W Hodge

1845

An

Inaugural Dissertation

on

Scarlatina,

respectfully submitted

to the examination of the

Provost and Regents,

and of the Faculty of Physic,

of the

University of Maryland,

for the degree of Doctor of Medicine,

by

James V Crawford

of

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Scarlatina.

In modern medical nomenclature, the barbarous term of Scarlatina, is applied to the disease, which forms the subject of our essay, and it appears now to have entirely replaced the original and more elegant name of Rosalia. The former term was introduced into medical literature by Sydenham, in 1670, and the authority of Dr Good has proved ineffectual to re-store the latter more classical appellation.

In the classification of Willan, which has been the most favourably received, for its union of simplicity with comprehensiveness, Scarlatina is comprised under the order of Exanthemata.

With regard to the origin of Scarlatina, or Scarlet fever, various opinions have been entertained; some, thinking they could distinguish it, in the descriptions of some of the ancient authors, others, of high authority contending that it is a disease of comparatively modern date, and of Eastern origin. It is at all events certain,

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that its accurate diagnosis, has but recently been made out, and Bateman refers its first correct history to the year 1793, when the second edition of Dr Withering's essay made its appearance.

Scarlatina is a febrile disease, of a contagious, and infectious nature, characterized, by a close and diffuse scarlet coloured efflorescence of the skin, and of the mucous membrane of the mouth and fauces; and also by the peculiar appearance of the reddened and elongated papillae of the tongue, as seen projecting through a whitish cream like coat, and compared to brilliant rubies set upon a white ground. The eruption commences on the second day of the fever, in the form of minute red points, slightly raised above the surface, and intermingled with points of a somewhat larger size. These are soon aggregated into patches of irregular size, or coalescing, they form a continuous efflorescence over the entire body. The rash generally declines on the fifth or sixth day from its eruption, terminating by resolution and desquamation of the cuticle. In

flammation of the throat is present in most cases.

It appears to us probable that the confusion which formerly prevailed on the subject of Scarlatina, is to be accounted for, by the various grades or types, in which it is now ascertained, this disease may appear.

The several varieties of Scarlatina, arise from the circumstances, firstly, that its poison chiefly affects the skin, and mucous membrane of the fauces, to either of which, its action maybe restricted; and secondly, that the poison acts with greater or less intensity, according to the peculiar idiosyncrasy of the patient, and the prevailing type of the epidemic.

When the fever is of a mild character, the cutaneous efflores-cence of the usual kind, and the throat unaffected, Scarlatina simplex exists.

In the second variety, the febrile excitement is greater, and there is inflammation of the fauces constituting Scarlatina anginosa.

In the third variety, (Scarlatina maligna,) the symptoms are of a more severe description, the fever is of a typhoid type, with

great depression of the vital powers, and it may be complicated with one or more of the following symptoms: gangrenous inflammation of the throat, tumefaction of the parotid and cervical glands, and an acrid discharge from the mucous membranes of the ear nostrils and intestines.

In a fourth variety the efflorescence is restricted to the mucous membrane of the mouth and throat. It has been designated by Dr Tweedie, Scarlatina faucium.

In some instances so sudden is the fatal influence of the poison upon the nervous system, as at once to prostrate the patient, and cause immediate death.

Scarlatina simplex is free from severe inflammation of the throat, or fauces, and is the most benign form of Scarlet fever. It is preceded by the ordinary precursory symptoms of fever, such as, general lassitude, and drowsiness; by pains in the head, in the back, and in the limbs; by rigors, succeeded by feverish heat; by restlessness, anxiety, sense of oppression, and an itching and tingling sensation, and parching heat of the skin; by a quick small pulse, and rapid respiration; by a dry cough, with

redness and congestion of the mucous membrane of the mouth and fauces, and thirst; and by nausea and pain at the epigastrium. The febrile excitement is generally of a moderate character, but is observed occasionally to vary from a very trivial disturbance, to symptoms of great prostration, rapid pulse, and pungent heat of skin. The tip and edges of the tongue are red, while the centre is covered by a white, or yellowish white coat, through which are seen projecting the congested papillae. There is frequently redness of the eyes, and the sense of smell may be affected, and the whole face swollen. Towards evening an exacerbation of these symptoms, is observed, and as the period of eruption draws near, they are much aggravated. At this period the pulse is much accelerated, and feeble and the oppression often very great. But occasionally, many of the symptoms above described, are not present, and the sensations of the patient, not further affected than by a trifling ailment. The eruption mostly makes its appearance upon the second day of the fever, when it is perceptible on the face and neck, in the form of innumerable red spots, and these coalescing, and multiplying, will grad-

-ually spread over the whole surface. On the fourth day the rash has covered the lower extremities, and reached its acme. On the face and neck, and around the fingers, the efflorescence is diffuse and continuous, but on the trunk it appears in large irregular patches. The scarlet hue is usually most vivid on the flexures of the joints, and on the loins, and nates. There is a perceptible granular roughness of the skin, but no elevation of the patches, as in measles. The decline of the eruption follows the same order as its invasion, occurring during the fifth day on the face and neck, during the sixth, on the upper extremities and trunk, and during the seventh, on the lower parts of the body. An eruption of little pearl coloured vesicles are occasionally observed about the fifth day, which Dr Watson observes are most thickly set on the thorax, and on the front and sides of the neck. The liquid which they contain is soon reabsorbed, and the cuticle which enclosed them, shrivels up, turns white, and comes off in a thick white scurf. During the eighth or ninth days, the cuticle desquamates; in the form of furfuraceous scales around the joints, and often in laminae

of considerable size, from the palms of the hands, and the soles of the feet. During the eruption, in some cases, the surface is smooth and uniform, in others, part of the surface, particularly that of the abdomen, presents a pimply aspect, and is rough or granular to the touch; and again, the eruption of the little vesicles which we have noticed above, are sometimes observed. The colour of the eruption is more vivid in the evening, than in the morning, particularly on the third and fourth days. When the redness is breaking up, the patchlike character of the eruption is again observable.

During the course of the disease, there may be present, more or less painful edema of the subcutaneous tissues, particularly on the face and hands. It has been observed, that on the decline of the disease, occasionally a sudden renewal of the febrile symptoms, and a temporary outbreak of the rash, occurs

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symptoms are the same with those of Scarlatina simplex, but more severe. There is more oppression, languor, and restlessness; and frequently, nausea and vomiting, and sometimes diarrhaa. The pulse is small, quick, and feeble, and as the intensity of the inflammation augments, it becomes more frequent and of unequal strength. The fever which is of a more active kind, than in the preceding variety, may either precede or accompany the sore throat, or it may be delayed untill the third or fourth day, and appear simultaneously with the efflorescence. The temperature of the skin is much augmented, and rises sometimes to 104°, or 108°, and even to 112°, and is accompanied with urgent thirst. There is pain in the head, faintness, and often delirium during the night. Wilson remarks that the premonitory symptoms are occasionally accompanied with hamorrhage from one or other of the mucous membranes. The inflammation of the fauces is violent, and as soon as the constitutional symptoms are established, the redness of the fauces and pharynx becomes intense. There is stiffness of the jaws, and difficulty of swallowing, arising from the swelling of the mucous membrane,

and from enlargement of the salivary, and lymphatic glands. There is also constriction of the laryngeal passages producing— hoarseness. There is more or less uneasiness of respiration, and a viscid tenacious secretion, and an exudation of coagulable lymph, which might be mistaken for sloughs of the mucous membrane, collects about the fauces. These patches of false membrane appear on the third or fourth day, when ulcera- tions also begin to be apparent. The tonsils and uvula are swollen, so as to block up the passage of the fauces, and the whole of the soft palate partakes of the same inflammatory action. The engorged and lengthened papillae lie upon the white mu- cus, with which the tongue is coated, presenting a striking con- trast, the edges of the tongue being of a bright red colour also. The red points gradually multiply, as the white fur clears away, untill the whole surface, is preternaturally clean and red, raw-looking and rough. The ulcerations of the mucous membranes, are denoted by the appearance of excavation, which is however sometimes concealed by the lymph (whose forma- tion appears to precede it,) and also by a ring of vessels around

each of the ulcerated spots. These ulcerations are by no means uncommon, and are indicative of no danger. The rash in this variety comes out in scattered patches on the chest and arms, or it may be confined to the back of the hand, and wrists, and may vanish and reappear at uncertain intervals, but it is generally of a more intense redness. It is in the vicinity of the joints that it is most uniform and vivid. The cutaneous congestion is of a longer duration, in this form of Scarlatina, than in the preceding, and is followed by less desquamation of the cuticle. The tonsils are sometimes superficially ulcerated, and true sloughs have been observed in the throat. The eruption grows pale on the fifth or sixth day, but, though the state of the throat may then improve, the disorder of the mucous membrane is continued for a fortnight or three weeks. Occasionally one of the joints, as of the finger or knee, becomes inflamed at the decline of the eruption, and still further lengthens the disease. In a more aggravated form of Scarlatina anginosa, there is an acrid discharge from the nostrils and ears, or inflammation of the parotid or cervical glands, terminating

in suppuration. After the cessation of the disease, the patient's powers are considerably prostrated, and much debility remains.

Scarlatina maligna. This is another form of the affection, in which there is a great disposition to sloughing, to mortification of the throat, and putrescency of the body, and in which the affection of the nervous system exists in its most aggravated form. Its greater or less severity appears to be dependent upon the constitution of the patient, the commodiousness of his habitation, and the season of the year. At its commencement it may differ but little from Scarlatina anginosa, but its formidable nature soon becomes apparent. The disease assumes a violent typhoid form, in which, the efflorescence is dark and livid, and comes out at a late period of the affection, and is very irregular in its course and duration. In Scarlatina maligna, the nervous power is extremely depressed, and the patient is restless, fretful, and very frequently delirious. The delirium, though generally of a low muttering description, is sometimes violent. There are periods of torpor or coma, and convulsions may occur. The head is greatly affected in this form

of the disease, and there exists a tendency to encephalitis, and other inflam-
-matory affections. The eyes are red and sunken, the cheeks darkly flushed
and tumid, and their mucous membrane aphthous. The pulse is quick,
irregular, and feeble, and the tongue which is at first white, and studded
with the congested papillae, afterwards become dry and brown, or black,
or it may be red, dry, and glazed, and often very tender and chapped.
There is an acrid excoriating discharge from the nostrils, and a viscid
secretion from the fauces, and very frequently, suppuration of the cer-
-vical and submaxillary glands. In many cases there is a great ten-
-dency to discharges from the mucous membranes, either of the nostrils
or throat, the intestines or urinary canal, and which are of an acrid
excoriating character. Sordes collect about the lips, and on the teeth,
and the fauces are greatly congested, and of a purplish hues. The ton-
-sils do not present the enlarged size, the bright redness, and hardness
of touch common to them in Scarlatina anginosa, but are soft, darkly
red, or livid, but little enlarged, and covered with sloughs, or deeply ex-
-cavated by foul and ragged ulcers. This condition of the tonsils, does
not impede respiration, and deglutition, so much as the swollen throat
of Scarlatina anginosa, but the respiration is as much obstructed by

the viscid secretions, which collect in the pharynx and trachea, causing it to be quick and rattling, and deglutition also is rendered equally difficult by the pain and spasm which attend the attempt at swallowing. The fever is occasionally accompanied with diarrhoea, and petechiæ are not uncommonly observed. The eruption which does not appear untill the third or fourth day of the fever, comes out in patches, and is partial, indistinct, and of uncertain duration.

The peculiar symptoms of each of the three varieties of Scarlet fever, above described, are so frequently intermingled, with one another, in some instances, that the affection cannot be referred to any of the three separately, or unconnectedly.

Even when Scarlatina at its onset, has been of the mildest form, its whole aspect may become suddenly changed, and the symptoms assume a malignant character; and it often exhibits in different members of the same family, simultaneously affected, every gradation from the mildest, to the most malignant form. Dr Tweedie describes cases terminating fatally on the second, third, or fourth days, without the practitioner being able to assign any satisfactory reason, or discover any lesion on the most careful examination of the body.

Scarlatina faucium. This is another form of the affection, in which the throat is affected, and not the surface. Dr Willan says, that it is evidently a species of Scarlatina, because it is capable of communicating by infection, all the varieties of that disease. It commences with all the characters of Scarlatina anginosa, or maligna, and runs the usual course of those diseases, with the exception of the cutaneous eruption. Sequelae. It sometimes happens, that when a patient is rapidly recovering from Scarlatina, life will be suddenly destroyed, by the supervention of some local affections, such as inflammation of some of the serous membranes, or bronchitis, and gastro enteritis; and these are always rendered dangerous, by the prostration of the system, produced by the preceding disorder. After the painful edema, which is often observed in the eyelids, face, and scrotum, and in the feet and hands, has subsided, the vitality of the parts may remain unimpaired, but in a few instances, they may fall into a state of mortification. In some cases the anasarca comes on (in) the interval, (between ten and twenty days, after the disappearance of the rash. It as often supervenes upon the mild, as upon the severer forms, but less frequently after Scarlatina maligna. The effusion generally extends over the whole body, but little danger is to be apprehended from this; but when it

occurs in the cavities of the serous and synovial membranes, the danger becomes imminent. The cause of this effusion has been referred by some to the transfer of the inflammatory action, to the structure of the kidney, as indicated by the occasional presence of urea in the effused fluid, and by the circumstance of the urine being brownish in colour, from admixture with blood, and more or less impregnated with albumen. It is the opinion of Dr Tweedie, that the frequency and power of the pulse, the albuminous urine, the rapidity of the accumulation, and the relief afforded by blood-letting, denote the result of an increased action of the sanguiferous system. That the latter circumstance does occur, is undoubtedly the fact, and the anasarca consequent thereon, may therefore be called a febrile dropsy, though it cannot be one of a sthenic kind. It is also true, that chronic disease of the kidney (as Bright's disease) not unfrequently supervenes upon the anasarca, but it does not appear that the affection of the kidney is the primary or proximate cause of the dropsy; for after death preceded by anasarca, Dr Watson says it is common to find no traces of inflammation. But it appears that exposure to cold, during the formation of new cuticle, or a little subsequent to it, is one of the chief exciting causes of the general vascular excitement. At the same time, there is debility of

the venous absorbent system (a debility which is shared in common with other systems of the body;) and thus the weakened absorbents are incapacitated for carrying off the accumulation of the fluid, which has ensued upon the excitement of the vascular system. Watson remarks, that the anasarca is worse after great desquamation of the cuticle. The morbid state of the fluids of the body, irritating the vessels through which they pass, sometimes involves the lymphatic system, and particularly the glands, in the secondary disorder. The lymphatic glands become inflamed and enlarged, and in debilitated systems are apt to end in abscess and suppuration, which may destroy the patient by prolonged irritation. The affections of the mucous membranes, are among the most frequent in the sequelae of Scarlatina; such as ulcerations and suppuration of the Eustachian tube, and meatus auditorius; ulceration of the mucous membrane of the nose, aphthae of the buccal cavity, ulceration and thickening of the lips, and chronic inflammation of the salivary glands. Loss of hearing may result from the participation of the tympanum in the affection of the Eustachian tube, and chronic diarrhoea may remain, from the effect of the poison upon the mucous membrane of the alimentary

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canal. In some instances there is a painful swelling of the joints after Scarlatina, and which is distinguishable from true rheumatism, according to Watson partly by the ease and benefit derived from friction.

Anatomical characters. In cadaverous examinations, the morbid appearances are by no means uniform. The congestion of the cutaneous capillaries, which in life produced the exanthema, speedily disappears after death. In some places the skin is of a florid colour, or dark red, and in others there are livid spots, and petechiae, caused by extravasation of blood, in the cutaneous, and subcutaneous cellular tissue. After fatal cases of Scarlatina anginosa, there may be observed, a deeply red, congested state of the mouth and pharynx, in some instances extending to the trachea and bronchi; and generally there is swelling of the tonsils, and adjacent parts, and these are frequently covered by coagulable lymph. In protracted cases, the kidneys have at times, presented a mottled and granulated aspect. In cases where violent delirium had been present, congestion of the brain, vascularity of the arachnoid, with a serous, and sometimes a milky effusion beneath it, have been observed.

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Causes and peculiarities. Though Willan thought that the constitution was not disposed to a second attack of Scarlatina, it appears to be generally conceded, that exceptions to this supposed universal law, are numerous, as they are in also in other exanthemata. Persons are not so liable to the contraction of Scarlatina, as to Measles and Small pox, and as a general rule children and females are more exposed to it, than adults and men, but Scarlatina being more particularly a disease of children, in childhood, both sexes appear to be nearly equally affected by it. Scarlatina has been thought to occur more frequently in Autumn, though in some epidemics it prevails in every season of the year. The origin of the fever, is to be ascribed to a local and unknown cause, and at the present day, in some instances, it can only be called spontaneous, there being apparently nothing, nothing to which its cause can be referred; but when the disease is once generated, we may say that its general production, is then occasioned by the specific miasm, which issues from the bodies of those affected by the disease. This miasm pervades the atmosphere, and in some particular district, perhaps, or season, which favours its generation, that peculiar condition of the atmosphere is established, which may act both as the

predisposing and exciting cause of the disease. The constitution of individuals, has also much to do, in resisting or favouring the effect of the poison upon the system. These circumstances will account for the fact, that susceptibility to its contagion, varies in different individuals, and even in the same individuals, under different circumstances, and at different times.

Scarlatina appears to be especially a disease of debility, having a tendency to prostrate both the body and mind. Its effect in depressing the tone, or the organic sensibility and contractility of the absorbents, induces us here to notice (though perhaps not in the proper place) the treatment of the anasarca which so often ensues upon Scarlatina; and which is partially referable to that depression, it being one of the elements which conspire to form the proximate cause of the effusion, as before mentioned. It is well known that dropsy is often a disease of debility, and why should it not be so here, when the peculiar effect of Scarlatina is to produce debility? And it appears not less consistent with the nature of the disease, to believe, that the organic contractility of the exhalant system, is also, injuriously modified by the same cause; and thus another element of the proximate

cause of the accumulation is furnished. However there are other circumstances coexistent, and generally necessary to its production. And one, is a degree of vascular excitement. The latter condition, acting as a vis a tergo, forces, in a manner, the serous or watery portion of the blood, through the relaxed exhalants. And this is the more readily to be conceived, when we reflect, that the blood itself is thinned by the previous diminution of its fibrine, and by the elimination of albumen by the kidneys. Nor is the vascular excitement, or the fever which precedes, or accompanies the anasarca, a fever of strength, or of high inflammatory action, requiring active depletion, but it is rather, one of irritability, and arises from the action of some exciting cause, upon a system already debilitated, and excitable, and therefore the more predisposed to such injurious action. Another circumstance, or condition, which is generally present, is, not organic disease, but congestion of the kidneys, arising from debility. To this state of the kidneys, may be ascribed the brownish colour of the urine, and its impregnation with albumen, when these symptoms are present. The admixture of blood in the urine, is another effect of that general relaxation, and tendency to hæmorrhage, which affect the mucous membranes in

Scarlatina, and from which at the time of the anasarcous effusion, they have not yet fully recovered. It is well known that the prescence of albumen is not always indicative, either of structural disease, or of inflammation of the kidneys; and moreover, other, and more characteristic symptoms of true inflammation are absent. Would not then, the relief afforded at times, in this affection by blood-letting appear mainly to depend on the circumstance, that it reduces the whole amount of blood; for by that reduction, the amount of fluid effused by the exhalants, must of course be diminished. The antiphlogistic treatment may thus be indirectly remedial, but can its efficacy depend upon this treatment being based upon true principles, if the anasarca for which it is prescribed be mainly the result of debility? And that an atonic state of the system does exist, appears to be recognized even by many of the practitioners who pursue the antiphlogistic plan; and as soon as possible after the alleviation of the anasarca, they are accustomed to prescribe tonics. Would it not therefore follow, ~~that~~ if the principles we have suggested be true, that a corroborant remedial agency, capable of invigorating the body generally, of restoring the healthy action of the circulatory system, and thereby removing congestion; of removing that irritability so often the

accompaniment of debility, and finally, of giving tone also to the absorbents themselves, will more rationally fulfil the proper indication, of restoring the balance of the exhalant and absorbent systems. And when indeed, the latter plan, has been observed to produce the happiest effects (when united with diuretics, and perhaps occasionally with a purge) will not facts also tend to the conclusion, or at all events warrant the opinion, that it is a rational treatment, and that it strikes at the root of the disorder?.

Diagnosis. The sore throat of Scarlet fever, is distinguishable from ordinary cynanche, by the quick, weak, irregular pulse of the former, and the prostration of the nervous power, and the enlargement of the tonsils. Scarlet fever is most liable to be confounded with Measles, and Roseola. From the former it may be distinguished, by the precursory symptoms, which are sneezing, suffusion of the eyes, cough, slight dyspnœa, and expectoration, which are absent in Scarlatina, where the first sensation of uneasiness is in the throat. In Scarlatina, the eruption appears on the second day in Measles, on the fourth. In one the rash is in irregular portions, of a crescentic or annular shape, of a rasp-berry-red colour, and slightly elevated; in the other the rash assumes the form of broad patches, of an indeterminate shape, of a more vivid, uniform, boiled-lobster, red. Scarlatina has been observed to

put on an appearance, which renders it liable to be mistaken for Rubeola, especially when united with catarrhal inflammation of the eyes or nose; and this is when it occurs in smaller patches than usual, in which the primary punctated form of the eruption, is more than usually obvious.

The partial and irregularly defined rash of Roseola distinguishes it from Scarlatina, as do also, the absence of angina, the mildness of the febrile disorder, and the short duration of the complaint. Dr Thompson says that Roseola differs from Scarlatina also, in first affecting the extremities, instead of the face. Patches precisely like those of Roseola, sometimes appear mixed with the rash of Scarlatina.

Prognosis. Scarlatina simplex is free from danger, except it be complicated with some internal local inflammation; but a strict supervision should be exercised, lest it should change into a graver form. There is a congestive form of this disease, where, as we have before remarked, the powers of life, may be overwhelmed at the outset. In infants the disease is commonly fatal on the seventh, or eighth day, but if the fever set in with delirium, or convulsions, death may occur on the fourth or fifth day. In infants dentition is an unfavourable complication. In Scarlatina anginosa, a bright florid appearance of the mucous membrane, is more favourable than when

it presents a dark livid aspect. In excessive swelling of the throat, and surrounding parts, especially when the air tubes are affected, the disease is dangerous; and in cases of this kind, edema of the glottis, may supervene, and rapidly destroy the patient. Among the indications for a favourable prognosis, are; a rash of a bright red colour, steady in its continuance, and generally diffused, desquamation of the cuticle, the pulse falling in frequency, and rising in power, and the breathing becoming gentle and full. Among the unfavourable indications, are, retrocession of the rash, a fluttering, rapid pulse, a brown tongue, acrid discharges from the nose, the intermixture of petechiæ with a dark, livid eruption, the admixture of blood in the urine and stools, muttering delirium, and a gangrenous appearance of the parts subjected to pressure.

The mortality of Scarlet fever, varies with the nature of the epidemic, one being perhaps of a mild benignant character, while another may be attended with great fatality. Thus, during the year 1837, according to Dr Gregory, the number of deaths, from Scarlatina in London, averaged 836; in 1839, the average number was 4264; and in 1840, 2238. During the past year (1844) in the city of Baltimore, where the whole number of deaths was 2879, there died from Scarlet fever 370. In children, the disease is more common,

in a very great degree between the ages of one and ten years. Between the latter ages, there occurred for instance (in a statistical calculation of its mortality) 1000 deaths, and the aggregate number, occurring at all ages above 10 years was about 80. It appears that the mortality of Scarlet fever in cities, is double that of the country, there having occurred in England, to the million, 788 deaths, in four years, in the cities, and 478 in the country and country towns.

Contagion. The infecting distance of Scarlatina is not determined, though it is considerable. It is communicable by fomites of all descriptions, and is infectious from the moment that constitutional symptoms have appeared; and the danger of infection, is even thought, not wholly to cease, untill three weeks of convalescence have passed. The infection of Scarlatina, has been known to remain in particular apartments of a house, for several weeks after the family had recovered from the disease. But there is not so general a susceptibility to the infection of Scarlatina as to that of Measles and Small pox; and it is not unfrequent to meet with persons, who, although, they had been often exposed to its influence, ever continued unaffected.

A cold and moist state of the atmosphere, and every circumstance, which tends to depress the powers of the nervous system, acts as predisposing causes to Scarlatina. It is mentioned by Wilson, that it is not always confined

to the human race, but that during an epidemic, which prevailed at Lion d'Angers its poison was observed to affect in a modified form, horses, cattle, and sheep.

Treatment. Scarlatina simplex of a mild character, requires but little medical assistance. The bowels may be regulated by mild doses of Magnesia, and farinaceous substances, and cooling drinks should form the regimen. Sponging the body with cold water affords much refreshment, when there is great heat of surface. The mildest forms of this disease should be watched, lest it should degenerate into a severer type, or become complicated with some internal inflammation.

At the decline of the disease, if there be much debility, wine, brandy, or some simple tonic may be given.

In Scarlatina anginosa, the local inflammation is distinct, and the fever of a more active type, but in view of the facts, that children are generally the subjects of this disease, who have less surplus of strength to spare than adults, and that with the exception of typhus miasm, perhaps there is nothing that tends so much to exhaust the nervous power, both general bleeding, and purging are unadvisable. But severe local inflammation, may at times, call for the local abstraction of blood, care

being taken, that the strength of the patient, shall not sink under its use. Whatever acrimonious material, may be lodged in the intes-tines, should be removed by some gentle aperient, but purgatives are to be viewed with some distrust, lest under their action, the tonicity of the intestinal mucous exhalants, already affected, should entirely give way, and an exhausting diarrhœa ensue. Dr Burrows directs, in case the mucous membrane shows signs of irritation, the admin-istration of alterative doses of Hyd. cum Creta, with Castor oil, and in some cases a few leeches or a blister to the abdomen, but we think Sinapisms preferable to blisters, from the tendency of the latter to produce sloughs of the integument. If the throat be affected with heat, redness, and swelling merely, and there is no extensive ulceration, ice or iced water, kept in the mouth or swallowed slowly, forms a grateful application. Capsicum infused in brandy or vinegar, forms a gargle also of great util-ity to the throat in this affection. For children of an age, in which gargles are inapplicable, a mixture may be made, of a teaspoon-ful of salt, dissolved in half a tumbler of water, to which sufficient capsicum is to be added; and a small quantity

of this is to be slowly swallowed at intervals, or injected with a syringe. The subborate of soda with honey and vinegar is also a very useful application. When the tumefaction of the tonsils is so great, as to impede deglutition, and respiration, they may be relieved by the application of leeches, followed by a poultice. A free incision of the tonsils has been reccommended by some to relieve their over congested state. The application of Nit. Argent. to the throat is always beneficial ~~to the throat~~ in this enlarged state of the tonsils, and in ulcerations of the throat, and it seems not only to constringe the vessels of the mucous membrane, but also to cause the viscid secretion of the fauces to separate. If excessive heat of the skin distresses the patient, there is no remedy so grateful, and so effectual as the ablution of the body with cold water. It allays the thirst, diminishes the frequency of the pulse, and calms the irritability. If a patient should feel cold after its use, a little warm wine and water should be administered. The cold ablution acts as a most effectual febrifuge, and causes the tongue to become moist, and a general perspiration to break forth, which is followed by a calm and

refreshing sleep. From the very nature of this disease, it might be premised that cases must frequently occur, which call for the administration of stimulants, to support the exhausted powers of the body. In these cases a stimulant plan of treatment has been attended with great success in the hands of several eminent practitioners, who have recorded statistical accounts of its efficacy, as compared with an opposite plan. In the writer's own knowledge, its value has been fully attested, in the practice of Dr Baer of Baltimore, who has long employed brandy as a stimulant in Scarlatina, and with great success.

In most systematic treatises on Medicine, authors recommend a mode of treatment, rather too strictly expectant, in Scarlatina simplex, and Anginosa, and limit their approval of stimulants, to the treatment of Scarlatina Maligna, as if there was a well defined line of distinction, between the three varieties. They appear also to overlook the fact, that the poison of Scarlatina, however the violence of its action, may in particular cases be modified, is still one and the same in all the varieties of the disease, and that the peculiar effect of the poison, is, to depress more

or less, the powers of the system (nervous) and of the body generally. The truth is, that the three varieties of Scarlatina in the order we have described them, may run one into another, or their symptoms may be so combined, as to render it as impracticable, as it would be unsafe, to put in practice the peculiar treatment adapted to any particular variety by systematic writers. Therefor if one should always wait for all the characteristic symptoms of Scarlatina maligna to appear, before he should believe himself justified in supporting the strength of a patient, the patient might in many cases, be beyond the power of tonics to restore, when the prescribed time, should have come for their administration.

Scarlatina maligna, of course calls for the employment of a stimulant and tonic method of treatment, for here local inflammation assumes a malignant aspect, and the fever a typhoid form. Mild aperients may be administered for the purpose of removing acrid matter from the intestines, but purgatives are attended with great risk. Even cold sponging is rarely or never necessary, but the body may be sponged with warm vinegar, or brandy and water. Quinine either alone, or in combination with the mineral acids,

and Carb. Ammonia, are among the best remedies. Wine has been highly reccommended by many, and Dr Robert Williams, who strongly advocated its use, remarks, "that the existence of delir-ium does not contraindicate its employment, for most commn-ly that symptom is merely a derangement of function, and may be disregarded.

But perhaps among all the agents which have been employed in this disease, none posesses a more peculiar stimulant power than Brandy. It is preferable to Wine, because its strength is more uniform, and can be more easily ascertained and regu-lated. We have alluded above to its employment by a practitioner of Baltimore, whose medical acumen and experience, backed by unusual succes in the treatment of those forms of Scarlatina, characterized by the untoward symptoms of debility and typhoid prostration, bears unequivocal testimony to the merits of the plan. Brandy proves very efficacious in relieving any symptoms of uneasines and irritability, that may be present in the aliment-ary canal, and by invigorating the tone of the intestinal mu-cous membrane, will tend to check diarrhœa. From the exten-

-sive sympathies of the stomach, and intestinal canal, with the rest of the system, and from their great importance in the economy, the cordial, corroborant and tonic action exerted upon these viscera by Brandy, would alone have a tendency to exalt the prostrate energies of the body. But in Scarlatina, where the depression is universal, a remedy is required, which shall act not merely as a local agent, but upon the whole system, and from the powerful and diffusible stimulus of Brandy, it is especially adapted to fulfil this indication. Under its use the patient, if in a sunken state will gradually revive. The pulse becomes less frequent, at the same time that its volume is increased. And this change of the pulse from its frequent, and feeble, or oppressed state is indicative of the removal of that tendency to congestion, which at times prevails in this disease. And the confusion of thought, or muttering delirium, and the uneasy respiration, consequent upon the oppressed circulation in the brain and lungs, will also disappear. The countenance will become expressive of relief, and restlessness will be diminished. These effects appear dependent upon the reaction of the nervous, upon the circulatory

system, from the stimulant action of the brandy upon the former, and to follow the equable and general distribution of the blood thereby produced. The known action of alcohol being to communicate additional energy to the muscles, to excite every part of the system, and particularly to rouse the functions of the brain and nervous system, its good effects in those forms of Scarlatina, characterized by symptoms, the reverse of strength and excitation, are easily understood. And again, in some cases, marked by that degree of excitement and irritability, which is the sure precursor of a state of collapse, the action of Brandy is to aid the circulatory system in maintaining an equable distribution of the blood, and to prevent the action of the heart and arteries from sinking beneath the threatened depressing influence of the disease. And in this way, it may be understood, how, so far from adding to the excitement, it may on the contrary act with a sedative influence, diminishing the heat and thirst, and promoting a gentle perspiration. For by giving strength to the heart, it will calm its irritable state, and lessen its anxious, quickened, and enfeebled action.

In cases of a congestive form of this disease, warmth, stimulants, and frictions with stimulating liniments may be employed.

In Scarlatina sine exanthemata, the treatment must be determined by the particular aspect of the fever, and regulated by the general principles we have laid down.

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